

CERTIFICATION REGARDING THE USE OF RIGHTS GUARD TECHNICAL DATA

- a. The bidder/offeror certifies that he will observe the following data disclosure and use restrictions on all data claimed to be proprietary to the Boeing Company (hereafter called "Rights Guard Technical Data"):
1. Rights Guard Technical Data shall not be reproduced, in whole or in part, except as required to respond to the Rights Guard Solicitation, or to perform any resulting Rights Guard Contract.
 2. Rights Guard Technical Data shall not be incorporated, in whole or in part, into other documentation, nor shall it be otherwise utilized except as required to respond to the Rights Guard Contract.
 3. Rights Guard Technical Data shall not be disclosed, in whole or in part, to any other person or entity and shall be disclosed within bidder's/offeror's company only to those employees having a need to know for the purpose of responding to the Rights Guard Solicitation or performing any resulting Rights Guard Contract.
 4. Rights Guard Technical Data will be returned or destroyed by all unsuccessful bidders/offerors promptly upon the award of a contract, and by each contractor promptly upon completion of contract performance. Mylars are not to be returned, but certification that they have been destroyed will be furnished. Simultaneously with the return or destruction of all such data, the respective bidder/offeror/contractor shall provide to the government a certification that all Rights Guard Technical Data has been returned or destroyed, as appropriate. This certification shall contain complete listing by drawing number or document number of the data destroyed. Failure to take such actions shall be grounds for removal of the bidder/offeror/contractor from qualifying bidders lists for all Rights Guard Procurements.
- b. CAUTION: The Government will notify The Boeing Company of an actual or suspected breach of the restrictions set forth in this certificate which may come within its knowledge. A violation of such restrictions may be grounds for legal proceedings against the violators by the Government and/or by The Boeing Company.
- c. Rights Guard Certifications shall be made a part of the Government's contract file to which the certification pertains. This file and any related documentation shall be made available to The Boeing Company upon request.

Company Name, Address & Mfg Code

Signature

Typed Name

Date

- NOTE #1 Rights Guard Certifications that contain alterations deletions or additions will not be accepted, and no Rights Guard Technical Data will be transmitted to any bidder/offeror until an unaltered, properly executed Rights Guard Certification has been received by the Government.
- NOTE #2 Any previous unmarked KC-135R Data previously furnished by the U.S. Air Force and not having the "Boeings Proprietary Rights Legend" on it will be marked with the following legend before use of such data:

Government Purpose License Legend

Contract No. Settlement Agreement in CL. ct. No. 309-89C

Contractor: The Boeing Company

Government Purpose License Rights shall be effective until otherwise mutually agreed by the government and Boeing.

The restrictions governing use of technical data marked with this legend are set forth in the definition of "Government Purpose License Rights" in paragraph (a)(14) of the clause at DFARS 252.227-7013 (Oct 1988). This legend, together with the indications of the portions of this data which are subject to Government purpose license rights, shall be included on any reproduction thereof which includes any part of the portions subject to such limitations.

INSTRUCTIONS FOR COMPLETING DD FORM 1423

(See DoD 5010.12M for detailed instructions.)

FOR GOVERNMENT PERSONNEL

- Item A. Self-explanatory.
- Item B. Self-explanatory.
- Item C. Mark (X) appropriate category: TDP - Technical Data Package; TM - Technical Manual; Other - other category of data, such as 'Provisioning', 'Configuration Management', etc.
- Item D. Enter name of system/item being acquired that data will
- Item E. Self-explanatory (to be filled in after contract award).
- Item F. Self-explanatory (to be filled in after contract award).
- Item G. Signature of preparer.
- Item H. Date CDRL was prepared.
- Item I. Signature of CDRL approval authority.
- Item J. Date CDRL was approved.
- Item 1. See DoD FAR Supplement Subpart 4.71 for proper numbering.
- Item 2. Enter title as it appears on data acquisition document cited in Item 4.
- Item 3. Enter subtitle of data item for further definition of data item (optional entry).
- Item 4. Enter Data Item Description (DID) number, military specification number, or military standard number listed in DoD 5010.12-L (AMSDL), or one-time DID number, that defines data content and format requirements.
- Item 5. Enter reference to tasking in contract that generates requirement for the data item (e.g. Statement of Work paragraph number).
- Item 6. Enter technical office responsible for ensuring adequacy of the data item.
- Item 7. Specify requirement for inspection/acceptance of the data item by the Government.
- Item 8. Specify requirement for approval of a draft before preparation of the final data item.
- Item 9. For technical data, specify requirement for contractor to mark the appropriate distribution statement on the data (ref DoDD 5230.24).
- Item 10. Specify number of times data items are to be delivered.
- Item 11. Specify as-of date of data item, when applicable.
- Item 12. Specify when first submittal is required.
- Item 13. Specify when subsequent submittals are required, when applicable.
- Item 14. Enter addresses and number of draft/final copies to be delivered to each addressee. Explain reproducible copies in Item 16.
- Item 15. Enter total number of draft/final copies to be delivered.
- Item 16. Use for additional/clarifying information for items 1 through 15. Examples are: Tailoring of documents cited in Item 4; Clarification of submittal dates in Items 12 and 13; Explanation of reproducible copies in Item 14; Desired medium for delivery of the data item.

FOR THE CONTRACTOR

Item 17. Specify appropriate price group from one of the following groups of effort in developing estimated prices for each data item listed on the DD Form 1423.

a. Group I. Definition - Data which is not otherwise essential to the contractor's performance of the primary contracted effort (production, development, testing and administration) but which is required by DD Form 1423.

Estimated Price - Costs to be included under Group I are those applicable to preparing and assembling the data item in conformance with Government requirements, and the administration and other expenses related to reproducing and delivering such data items to the Government.

b. Group II. Definition - Data which is essential to the performance of the primary contracted effort but the contractor is required to perform additional work to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, or quality of the data item.

Estimated Price - Costs to be included under Group II are those incurred over and above the cost of the essential data item without conforming to Government requirements, and the administrative and other expenses related to reproducing and delivering such data item to the Government.

c. Group III. Definition - Data which the contractor must develop for his internal use in performance of the primary contracted effort and does not require any substantial change to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, and quality of the data item.

Estimated Price - Costs to be included under Group III are the administrative and other expenses related to reproducing and delivering such data item to the Government.

d. Group IV. Definition - Data which is developed by the contractor as part of his normal operating procedures and his effort in supplying these data to the Government is minimal.

Estimated Price - Group IV items should normally be shown on the DD Form 1423 at no cost.

Item 18. For each data item, enter an amount equal to that portion of the total price which is estimated to be attributable to the production or development for the Government of that item of data. These estimated data prices shall be developed only from those costs which will be incurred as a direct result of the requirement to supply data, over and above those costs which would otherwise be incurred in performance of the contract if no data were required. The estimated data prices shall not include any amount for rights in data. The Government's right to use data shall be governed by the pertinent provisions of the contract.

1049

PACKAGING REQUIREMENTS

PR, MIPR, OR DOCUMENT NUMBER

FD 2020-03-23066

1. PACKAGING REQUIREMENTS: Block 1 shall always be completed and further defined in Blocks 2, 3, or 4. The term "Item ID" refers to line item number, item name, NSN/MMAC, part number, or any other way of identifying a particular item. MIL-STD-2073-1 represents Military Preservation (PRES) and Packing (PACK). Military packing consists of levels A, B, and Minimum (M). ASTM D3951 could be substituted by another document if specified in Block 2. Quantity Per Unit Pack (QUP) and Commercial Best Practice (CBP) are abbreviated. The reverse side of this form has the European Union environmental requirements.

ITEM ID	QUP (#)	MIL-STD-2073-1		PRES (X)	PACK (A/B/M)	COMMERCIAL		CBP (X)	SPECIAL PACKAGING INSTRUCTION NUMBER
		PRES (X)	PACK (A/B/M)			PRES (X)	PACK (X)		
1620-01-018-4759	001	X	B						FO10184759 78114
1620019676214	001	X	B						FO10176680 03111
1620010121969	001	X	B						
0003									

2. ADDITIONAL PACKAGING AND CONTAINER MARKING REQUIREMENTS (Specify all revisions and dates of required specifications, standards, and data item descriptions (DIDs))

3. INSTRUCTIONS TO CONTRACTING OFFICER: Insert appropriate clause(s) into Section D for applicable item(s) as indicated below.

<input checked="" type="checkbox"/>	AFMCFARS 5352.247-9006, SHIPPING CONTAINER MARKING. ITEM NAME(s) OR NSN/MMAC
<input type="checkbox"/>	AFMCFARS 5352.247-9008, MARKING OF WARRANTED ITEMS. ITEM NAME(s) OR NSN/MMAC
<input type="checkbox"/>	AFMCFARS 5352.247-9007, SPECIFICATION COMMERCIAL PACKAGING (ASTM D3951). ITEM NAME(s) OR NSN/MMAC
<input type="checkbox"/>	AFMCFARS 5352.247-9008, CONTRACTOR COMMERCIAL PACKAGING (Commercial Best Practice). ITEM NAME(s) OR NSN/MMAC
<input checked="" type="checkbox"/>	AFMCFARS 5352.247-9009, MILITARY PACKAGING AND MARKING. ITEM NAME(s) OR NSN/MMAC
<input type="checkbox"/>	AFMCFARS 5352.247-9010, ENGINEERED OR SPECIALIZED CONTAINERS (CDRS). ITEM NAME(s) OR NSN/MMAC
<input type="checkbox"/>	AFMCFARS 5352.247-9011, PACKAGING AND MARKING OF HAZARDOUS MATERIAL. ITEM NAME(s) OR NSN/MMAC
<input type="checkbox"/>	AFMCFARS 5352.247-9013, PACKAGING DATA (Coded and/or Special Packaging Instructions). ITEM NAME(s) OR NSN/MMAC

4. CODED DATA: Coded requirements shall be interpreted in accordance with MIL-STD-2073-1.

ITEM	QUANTITY		PRES METH	C D	PRES MTL	WRAP MTL	CUSH DUNN	UNIT CON T	INT CON	U C L	SPEC MKG	UNIT PACK WEIGHT			UNIT PACK SIZE			UNIT PACK CUBE		
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1620010121969																				
0003	001	000331													0039000400040000	0000000000	003610			

ORGANIZATION

LGMPE

PACKAGING SPECIALIST (Typed Name/Signature)

Mike Stephens

DATE

2003/7/9

AFMC FORM 158, 20030408 (EF-V1)

PREVIOUS EDITION IS OBSOLETE

SEE REVERSE SIDE

2 of 9

PACKAGING REQUIREMENTS

PR, MIPR, OR DOCUMENT NUMBER

FD 2020-03-23066

1. PACKAGING REQUIREMENTS: Block 1 shall always be completed and further defined in Blocks 2, 3, or 4. The term "item ID" refers to line item number, item name, NSN/MMAC, part number, or any other way of identifying a particular item. MIL-STD-2073-1 represents Military Preservation (PRES) and Packing (PACK). Military packing consists of levels A, B, and Minimum (M). ASTM D3951 could be substituted by another document if specified in Block 2. Quantity Per Unit Pack (QUP) and Commercial Best Practice (CBP) are abbreviated. The reverse side of this form has the European Union environmental requirements.

ITEM ID	QUP (#)	MIL-STD-2073-1 PRES (X)	PACK (A/B/M)	COMMERCIAL		CBP	SPECIAL PACKAGING INSTRUCTION NUMBER
				ASTM D3951 PRES (X)	PACK (X)		
16200003109830	001	X	B				
0005							
16200010753543	001	X	B				F603109930 99336
0006							
16200013332153	001	X	B				F0123332153 99139
0007							

SPECIAL PACKAGING INSTRUCTION NUMBER

COMMERCIAL ASTM D3951 PRES (X) PACK (X) CBP

SPECIAL PACKAGING INSTRUCTION NUMBER

CBP

COMMERCIAL

MIL-STD-2073-1

QUP

ITEM ID

PACK (A/B/M)

PRES (X)

PACK (X)

CBP

SPECIAL PACKAGING INSTRUCTION NUMBER

COMMERCIAL

ASTM D3951

PRES (X)

PACK (X)

CBP

SPECIAL PACKAGING INSTRUCTION NUMBER

COMMERCIAL

ASTM D3951

PRES (X)

PACK (X)

CBP

SPECIAL PACKAGING INSTRUCTION NUMBER

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PRES (X)

PACK (X)

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SPECIAL PACKAGING INSTRUCTION NUMBER

COMMERCIAL

PACKAGING REQUIREMENTS

PR, MIPR, OR DOCUMENT NUMBER

FD 2030-03-23066

1. PACKAGING REQUIREMENTS: Block 1 shall always be completed and further defined in Blocks 2, 3, or 4. The term "item ID" refers to the line item number, item name, NSN/MMAC, part number, or any other way of identifying a particular item. MIL-STD-2073-1 represents Military Preservation (PRES) and Packing (PACK). Military packing consists of levels A, B, and Minimum (M). ASTM D3961 could be substituted by another document if specified in Block 2. Quantity Per Unit Pack (QUP) and Commercial Best Practices (CBP) are abbreviated. The reverse side of this form has the European Union environmental requirements.

3. INSTRUCTIONS TO CONTRACTING OFFICER: Insert appropriate clause(s) into Section D for applicable item(s) as indicated below.

AFMCFARS 5352.247-9005, SHIPPING CONTAINER MARKING. ITEM
NAME(S) OR NSN/MMAC _____

AFMCFARS 5352.247-9006, MARKING OF WARRANTED ITEMS.

AFMCFARS 5352.247-9007, SPECIFICATION COMMERCIAL PACKAGING (ASTM D3951). ITEM NAME(S) OR NSN/MMAC

AFMCFARS 5352.247-9008, CONTRACTOR COMMERCIAL PACKAGING (Commercial Best Practice). ITEM NAME(s) OR NSN/MMAC

AFMCFARS 5352.247-9009, MILITARY PACKAGING AND MARKING.
(ITEM NAME(S) OR NSN/MMAC _____)

AFMCFARS 5352.247-9010, ENGINEERED OR SPECIALIZED CONTAINERS (CDRS). ITEM NAME(S) OR NSN/MMMAC

AFMCFARS 5352.247-9011, PACKAGING AND MARKING OF
HAZARDOUS MATERIAL, ITEM NAME(S) OR NSN/MMAC

AFMCFARS 6352.247-8013, PACKAGING DATA (Coded and/or Special Packaging Instructions). ITEM NAME(s) OR NSN/MMAC

• CODED DATA: Coded requirements shall be interpreted in accordance with MIL-STD-2073-1.

[illegible]

ORGANIZATION

LGND

PACKAGING SPECIALIST (Typed Name/Signature)

Mike Stephens

DATE _____

2003/7/8

AFMC FORM 158, 20030408 (EF-V1)

PREVIOUS EDITION IS OBSOLETE

SEE REVERSE SIDE

PACKAGING REQUIREMENTS

PR, MIPR, OR DOCUMENT NUMBER	FD 2020-03-23060									
<p>1. PACKAGING REQUIREMENTS: Block 1 shall always be completed and further defined in Blocks 2, 3, or 4. The term "Item ID" refers to line item number, item name, NSN/MMAC, part number, or any other way of identifying a particular item. MIL-STD-2073-1 represents Military Preservation (PRES) and Packing (PACK). Military packing consists of levels A, B, and Minimum (M). ASTM D3951 could be substituted by another document if specified in Block 2. Quantity Per Unit Pack (QUP) and Commercial Best Practice (CBP) are abbreviated. The reverse side of this form has the European Union environmental requirements.</p>										
ITEM ID	QUP (#)	MIL-STD-2073-1 PRES (X)	PACK (A/B/M)	COMMERCIAL ASTM D3951 PRES (X)	PACK (X)	SPECIAL PACKAGING INSTRUCTION NUMBER				
1620012964328	001	X	B							
1620014423188	0019	X	B							
1620010710534	0020	X	B			FOI0710534 99088				
<p>2. ADDITIONAL PACKAGING AND CONTAINER MARKING REQUIREMENTS (Specify all revisions and dates of required specifications, standards, and data item descriptions (DIDs))</p>										
<p>3. INSTRUCTIONS TO CONTRACTING OFFICER: Insert appropriate clause(s) into Section D for applicable item(s) as indicated below.</p>										
AFMCFARS 5352.247-9005, SHIPPING CONTAINER MARKING. ITEM NAME(s) OR NSN/MMAC							X			
AFMCFARS 5352.247-9006, MARKING OF WARRANTED ITEMS. ITEM NAME(s) OR NSN/MMAC										
AFMCFARS 5352.247-9007, SPECIFICATION COMMERCIAL PACKAGING (ASTM D3951). ITEM NAME(s) OR NSN/MMAC										
AFMCFARS 5352.247-9008, CONTRACTOR COMMERCIAL PACKAGING (Commercial Best Practice). ITEM NAME(s) OR NSN/MMAC										
AFMCFARS 5352.247-9009, MILITARY PACKAGING AND MARKING. ITEM NAME(s) OR NSN/MMAC							X			
AFMCFARS 5352.247-9010, ENGINEERED OR SPECIALIZED CONTAINERS (CDRS). ITEM NAME(s) OR NSN/MMAC										
AFMCFARS 5352.247-9011, PACKAGING AND MARKING OF HAZARDOUS MATERIAL. ITEM NAME(s) OR NSN/MMAC										
AFMCFARS 5352.247-9013, PACKAGING DATA (Coded and/or Special Packaging Instructions). ITEM NAME(s) OR NSN/MMAC										

[illegible]

SEE REVERSE SIDE

PACKAGING REQUIREMENTS

[illegible]

PACKAGING REQUIREMENTS

PR, MIPR, OR DOCUMENT NUMBER

FD 2020-63-23866

1. PACKAGING REQUIREMENTS: Block 1 shall always be completed and further defined in Blocks 2, 3, or 4. The term "item ID" refers to line item number, item name, NSN/MMAC, part number, or any other way of identifying a particular item. MIL-STD-2073-1 represents Military Preservation (PRES) and Packing (PACK). Military packing consists of levels A, B, and Minimum (M). ASTM D3961 could be substituted by another document if specified in Block 2. Quantity Per Unit Pack (QUP) and Commercial Best Practices (CBP) could be substituted by another document if specified in Block 2. Quantity Per Unit Pack (QUP) and Commercial Best Practices (CBP) are abbreviated. The reverse side of this form has the European Union environmental requirements.

ITEM ID	QUP	MIL-STD-2073-1 PRES	PACK (A/B/M)	COMMERCIAL ASTM D3951 PRES	CBP PACK (X)
	(#)	(X)		(X)	(X)

**SPECIAL PACKAGING
INSTRUCTION
NUMBER**

FO64176249 88347

F80195481D 85343

2. ADDITIONAL PACKAGING AND CONTAINER MARKING REQUIREMENTS (Specify all revisions and dates of required specifications, standards, and data item descriptions (DIDs))

4. CODED DATA: Coded requirements shall be interpreted in accordance with MIL-STD-2073-1

[illegible]

ORGANIZATION

PACKAGING SPECIALIST (Typed Name/Signature)

Good

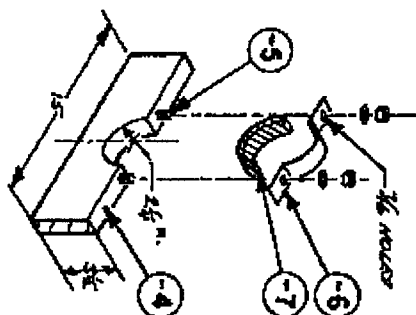
DATE _____

2003/7/8

AFMC FORM 158, 20030408 (EF-V1)

PREVIOUS EDITION IS OBSOLETE

SEE REVERSE SIDE



NUMBER "170 44-018-4751" ON ONE SIDE OF CONTAINER

[illegible]

NOTES:
1. MIL-C-18117, GRADE 2 SHALL BE APPLIED TO AXLES, CYLINDERS, AND BUSHINGS, AND MIL-B-23427 TO BEARINGS. TREATED PARTS SHALL BE COATED WITH MIL-B-121 BARRELFIN SUSCEPT WITH 74-67, [www.fishbase.org](#).
2. PAUSE, POLYURETHANE, 999-C-1287, OR EQUIV. SHALL BE USED AT ALL POINTS OF CONTACT WITH HOOD BLOODING AND METAL STRAPPING.
3. THE DOWN STRAP SHALL BE .008 X 1 1/4 X AN EQUIVALENT TO SPECIFICATION QQ-S-711, TYPE I, CLASS H. LENGTH AS REQUIRED. MOLDS SHALL BE 7/16 INCH DIAMETER.

[illegible]

<h2 style="margin: 0;">SPECIAL PACKAGING INSTRUCTION</h2>			CODE ID 98747	SPI NO. (TPD) F01-017-6680 SHEET 1 OF 4																																
PART OR DRAWING NO. 18797-1	NATIONAL STOCK NO. 1620-01-017-6680	CURRENT REV B	ILL. C. CHARBONEAU CHK. T. ZIMMERMAN ENGR. M. STEPHENS AUTH. P. FRANCIS																																	
ITEM NOMENCLATURE CYLINDER ASSEMBLY / AC-A10		ORIGINAL DATE 76170																																		
MILITARY PRESERVATION IAW MIL-STD-2073 SERVICEABLE METHOD: 20 UNSERVICEABLE METHOD: 20 QUP 001 ICQ 000 CLEANING & DRYING: IAW MIL-STD-2073 PRESERVATIVE: MIL-PRF-16173, GRADE 2			PACKING AS SPECIFIED BELOW AND BILL OF MATERIALS <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">LEVEL</th> <th style="text-align: left;">SPEC</th> <th style="text-align: left;">STYLE</th> <th style="text-align: left;">TYPE</th> <th style="text-align: left;">CL</th> <th style="text-align: left;">VRTY</th> <th style="text-align: left;">GR</th> <th style="text-align: left;">TR</th> </tr> <tr> <td>A</td> <td>ASTM-D6251</td> <td>A</td> <td>III</td> <td>2</td> <td></td> <td></td> <td>B</td> </tr> <tr> <td>B</td> <td>ASTM-D6251</td> <td>A</td> <td>III</td> <td>1</td> <td></td> <td></td> <td>A</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">LEVEL A</th> <th style="text-align: left;">LEVEL B</th> </tr> <tr> <td>GROSS CU FT</td> <td>8.87</td> </tr> <tr> <td>GROSS WT LBS</td> <td>93.0</td> </tr> <tr> <td>DESIGN FRAGILITY G</td> <td>110</td> </tr> </table>		LEVEL	SPEC	STYLE	TYPE	CL	VRTY	GR	TR	A	ASTM-D6251	A	III	2			B	B	ASTM-D6251	A	III	1			A	LEVEL A	LEVEL B	GROSS CU FT	8.87	GROSS WT LBS	93.0	DESIGN FRAGILITY G	110
LEVEL	SPEC	STYLE	TYPE	CL	VRTY	GR	TR																													
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CLOSURE LEVEL A: IAW ASTM-D6251 LEVEL B: IAW ASTM-D6251			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="3" style="text-align: center;">REVISIONS</th> </tr> <tr> <th style="width: 10%;">LTR</th> <th style="width: 70%;">DESCRIPTION</th> <th style="width: 20%;">DATE</th> </tr> <tr> <td>A</td> <td>CHANGE CONTAINER & UPDATED</td> <td>99109</td> </tr> <tr> <td>B</td> <td>ADD WOOD STATEMENT & UPDATE</td> <td>03111</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>		REVISIONS			LTR	DESCRIPTION	DATE	A	CHANGE CONTAINER & UPDATED	99109	B	ADD WOOD STATEMENT & UPDATE	03111																				
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SEE NOTES PAGE 2.																																				
-8	A/R	TAPE	3/4 X A/R	A-A-883 TYPE I OR II																																
-7	A/R	WRAP	A/R	MIL-PRF-121 GRADE A																																
-6	1	SUPPORT, LOWER (SEE DETAIL B)	19 1/2 X 5 3/4 X 1 1/2	ASTM-D4727 CF, DOM, TW, GR 1100																																
-5	1	SUPPORT, UPPER (SEE DETAIL B)	19 1/2 X 7 3/4 X 1 1/2	ASTM-D4727 CF, DOM, TW, GR 1100																																
-4	1	SUPPORT, LOWER (SEE DETAIL A)	19 1/2 X 7 1/2 X 1 1/2	ASTM-D4727 CF, DOM, TW, GR 1100																																
-3	1	SUPPORT, UPPER (SEE DETAIL A)	19 1/2 X 6 X 1 1/2	ASTM-D4727 CF, DOM, TW, GR 1100																																
-2	2	END PADS	19 1/2 X 13 1/2 X 1/2 TW	ASTM-D4727 CF, DOM, TW, GR 1100																																
-1	8	INSIDE CLEATS	1 X 3 (NDM) X 13 1/2	ASTM-D6199 CLASS 2																																
P/N	QTY REQD	NOMENCLATURE DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION																																

SPI NO. F01-017-6680

SPECIAL PACKAGING INSTRUCTION	CODE ID 98747	SPI NO. (TPD) F01-017-6680
ITEM NOMENCLATURE CYLINDER ASSEMBLY / AC-A10		SHEET 2 OF 4
<p>EUROPEAN UNION (EU) REQUIREMENTS NOTICES</p> <p>NOTICE 1: LUMBER AND PACKAGING/CONTAINER STATEMENT - "ALL WOODEN LUMBER CONTAINERS PRODUCED ENTIRELY OR IN PART OF NON-MANUFACTURED SOFTWOOD SPECIES SHALL BE CONSTRUCTED FROM HEAT TREATED (HT) MATERIAL (HT TO 56 DEGREES CENTIGRADE OR 133 DEGREES FAHRENHEIT FOR 30 MINUTES). CERTIFICATION IS REQUIRED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC). CONSTRUCTION AND CERTIFICATION SHALL BE IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS, BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT WWW.APHIS.USDA.GOV.</p> <p>NOTICE 2: WOODEN PALLET STATEMENT - "ALL WOODEN PALLETS PRODUCED ENTIRELY OR IN PART OF NON-MANUFACTURED SOFTWOOD SPECIES SHALL BE CONSTRUCTED FROM HEAT TREATED (HT) MATERIAL (HT TO 56 DEGREES CENTIGRADE OR 133 DEGREES FAHRENHEIT FOR 30 MINUTES). CERTIFICATION IS REQUIRED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC). CONSTRUCTION AND CERTIFICATION SHALL BE IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS, BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT WWW.APHIS.USDA.GOV.</p> <p>NOTICE 3: HARDWOOD SPECIES STATEMENT - "ALL WOODEN PALLETS PRODUCED ENTIRELY OF NON-MANUFACTURED HARDWOOD SPECIES SHALL BE IDENTIFIED BY A PERMANENT MARKING OF "NC" (NON-CONIFEROUS), 1.25 INCHES OR GREATER IN HEIGHT, ACCOMPANIED BY THE CAGE CODE OF THE CONTRACTED MANUFACTURER AND THE MONTH AND YEAR OF THE CONTRACT. ON PALLETS, THE MARKING SHALL BE APPLIED TO THE STRINGER OR BLOCK ON OPPOSITE SIDES AND ENDS OF THE PALLET AND BE CONTRASTING AND CLEARLY VISIBLE."</p> <p>NOTES</p> <ol style="list-style-type: none"> 1. COAT MACHINED SURFACES MADE OF STEEL WITH MIL-PRF-16173, GRADE 2. WRAP ITEM WITH REF -7. TAPE WRAP IN PLACE WITH REF -8, TAPE AS REQUIRED. 2. NAIL CLEATS, REF -1, INTO THE POSITIONS SHOWN IN THE CONTAINER USING ANY SUITABLE NAILS OR STAPLES THAT MEET ASTM-F1667. THE NAILS ARE REQUIRED TO BE DEEP ENOUGH THAT THE CLEATS WILL NOT COME OFF. CLINCHED NAILS ARE THE BEST. INSERT THE END PADS, REF -2, WHERE SHOWN. INSERT LOWER SUPPORTS, REF -4 AND -6 INTO THE SLOTS BETWEEN THE CLEATS AS SHOWN. PLACE THE PRESERVED AND WRAPPED CYLINDER ASSEMBLY INTO THE LOWER SUPPORTS AND SECURE INTO POSITION BY INSERTING UPPER SUPPORTS, REF -3 AND -5. EXTRA END PADS CAN BE USED TO ENSURE THERE IS NO MOVEMENT END TO END OF THE CYLINDER. CLOSE AS REQUIRED. 3. ALTERNATE TRIPLE WALL FLUTE DIRECTION ON FIBERBOARD WHEN MAKING SUPPORTS, REF -3, -4, -5 AND -6. THIS GIVES THE SUPPORTS STRENGTH IN BOTH DIRECTIONS. 4. ASSETS PACKAGED IN ACCORDANCE WITH PREVIOUS EDITIONS OF THIS SPI DO NOT REQUIRE REPACKAGING, UNLESS THE SPI NO LONGER PROVIDES PROTECTION FOR THE ASSET. 		

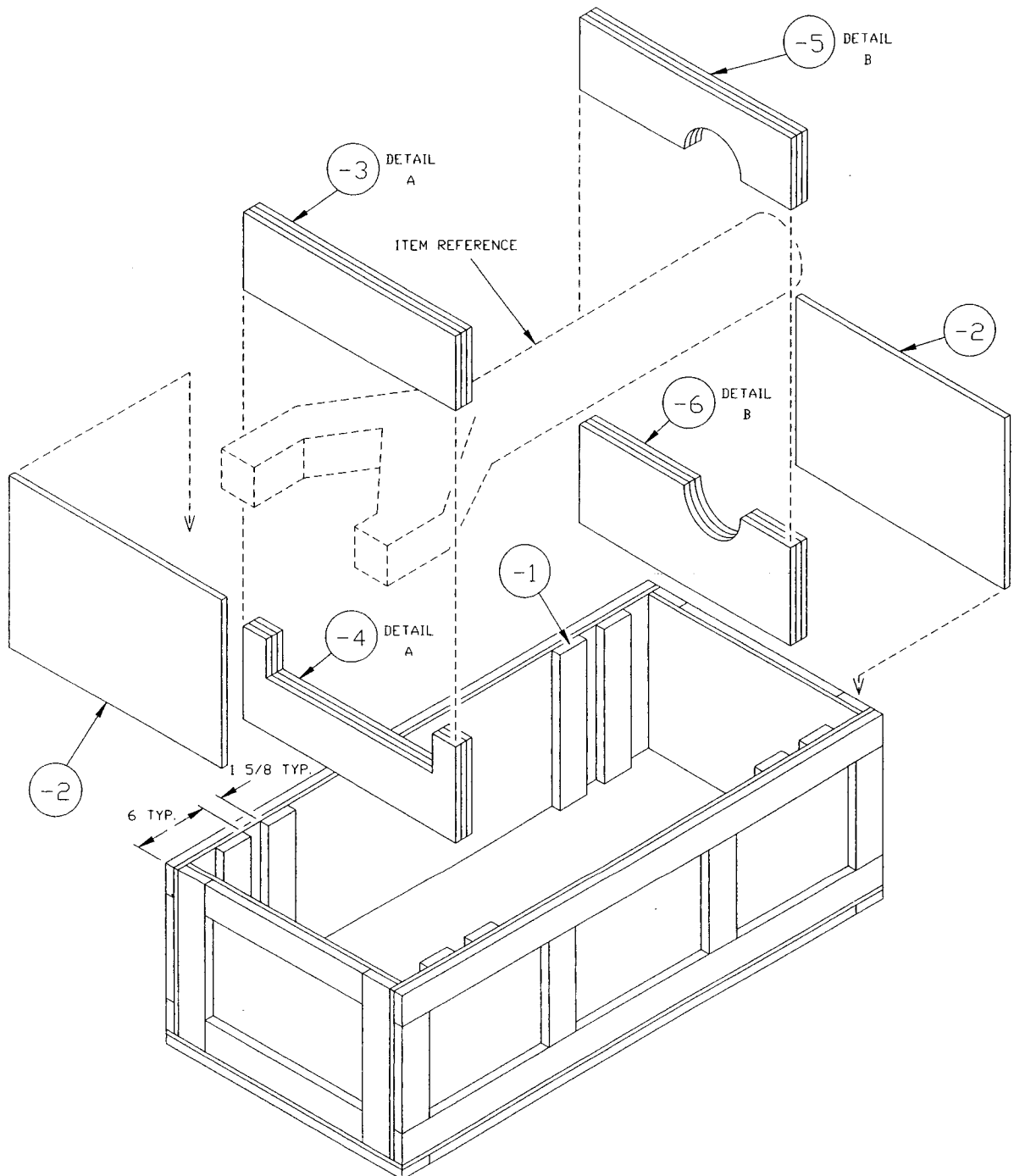
SPECIAL PACKAGING INSTRUCTION

CODE ID
98747

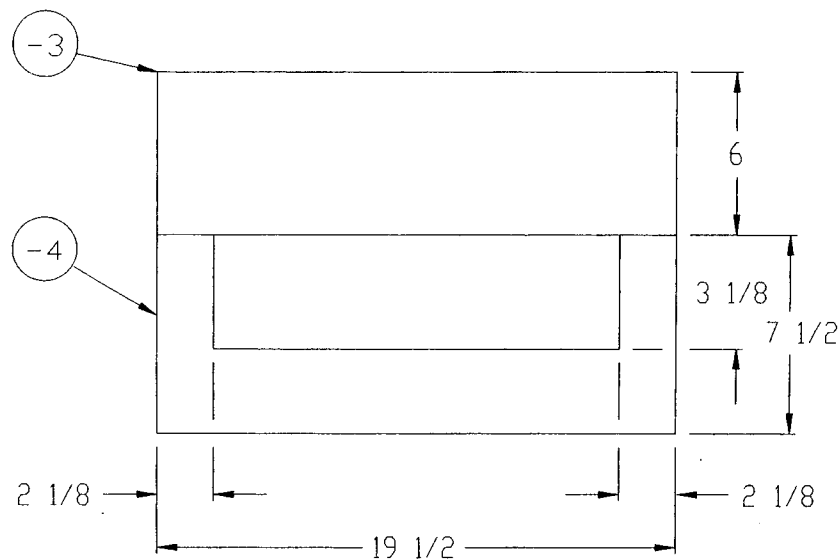
SPI NO. (TPO)
F01-017-6680

ITEM NOMENCLATURE
CYLINDER ASSEMBLY / AC-A10

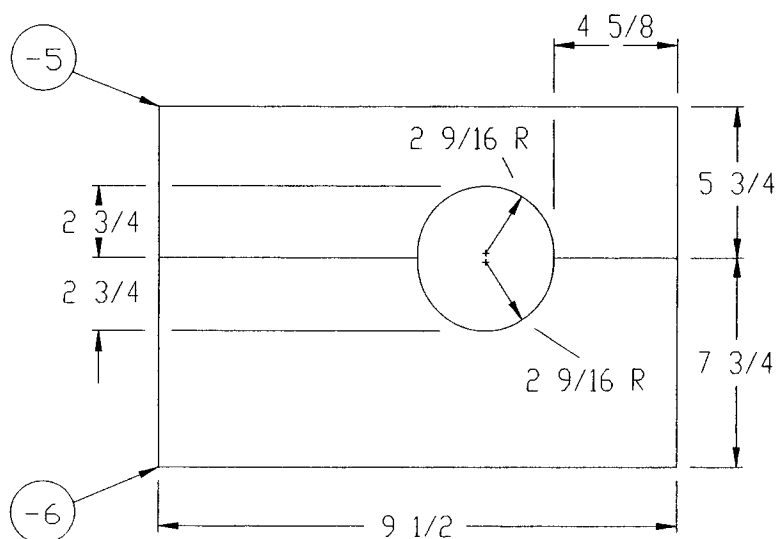
SHEET 3 OF 4



SPECIAL PACKAGING INSTRUCTION	CODE ID 98747	SPI NO. (TPD) F01-017-6680
ITEM NOMENCLATURE CYLINDER ASSEMBLY / AC-A10		SHEET 4 OF 4



DETAIL A



DETAIL B

SPECIAL PACKAGING INSTRUCTION			CODE ID 98747	SPI NO. (TPD) 00-310-9830																																																																
			SHEET 1 OF 3																																																																	
PART OR DRAWING NO. 68A450602-1001	NATIONAL STOCK NO. 1620-00-310-9830	CURRENT REV	ILL. E. NYE <i>E. Nye</i>																																																																	
ITEM NOMENCLATURE CYLINDER, LANDING GEAR		ORIGINAL DATE 88336	CHK. F. LANDERS <i>F. Landers</i> ENGR. M. MEDINA <i>M. Medina</i> AUTH. B. EVANS <i>B. Evans</i>																																																																	
PRESERVATION IAW MIL-P-116 LEVEL A METHOD I LEVEL B METHOD I LEVEL C METHOD I QUP 001 ICD 000 CLEANING METHOD C-1 DRYING METHOD D-1 PRESERVATIVE MIL-C-16173, GR 2		PACKING AS SPECIFIED BELOW AND BILL OF MATERIALS <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>LEVEL</th> <th>SPEC</th> <th>STYLE</th> <th>TYPE</th> <th>CL</th> <th>VRTY</th> <th>GR</th> </tr> <tr> <td>A</td> <td>PPP-B-621(MDD)</td> <td>4</td> <td></td> <td>2</td> <td></td> <td>A</td> </tr> <tr> <td>B</td> <td>PPP-B-621(MDD)</td> <td>4</td> <td></td> <td>1</td> <td></td> <td>B</td> </tr> <tr> <td>C</td> <td>PPP-B-621(MDD)</td> <td>4</td> <td></td> <td>1</td> <td></td> <td>B</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th>LEVEL A</th> <th>LEVEL B</th> <th>LEVEL C</th> </tr> <tr> <td>GROSS CU FT</td> <td>6.087</td> <td>6.087</td> <td>6.087</td> </tr> <tr> <td>GROSS WT LBS</td> <td>67</td> <td>67</td> <td>67</td> </tr> <tr> <td>DESIGN FRAGILITY G</td> <td>110</td> <td>110</td> <td>110</td> </tr> <tr> <td></td> <td>LENGTH</td> <td>WIDTH</td> <td>DEPTH</td> </tr> <tr> <td>CNTR L.D.</td> <td>39 1/2</td> <td>19 1/8</td> <td>11</td> </tr> <tr> <td>CNTR O.D.</td> <td>42 1/2</td> <td>20 5/8</td> <td>12</td> </tr> <tr> <td>ITEM DIM</td> <td>36 1/2</td> <td>15 1/4</td> <td>9</td> </tr> <tr> <td>ITEM WT LBS</td> <td>26</td> <td></td> <td></td> </tr> </table>			LEVEL	SPEC	STYLE	TYPE	CL	VRTY	GR	A	PPP-B-621(MDD)	4		2		A	B	PPP-B-621(MDD)	4		1		B	C	PPP-B-621(MDD)	4		1		B		LEVEL A	LEVEL B	LEVEL C	GROSS CU FT	6.087	6.087	6.087	GROSS WT LBS	67	67	67	DESIGN FRAGILITY G	110	110	110		LENGTH	WIDTH	DEPTH	CNTR L.D.	39 1/2	19 1/8	11	CNTR O.D.	42 1/2	20 5/8	12	ITEM DIM	36 1/2	15 1/4	9	ITEM WT LBS	26		
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CLOSURE IN ACCORDANCE WITH PPP-B-621 NOTES: 1. PRESERVE CRITICAL AREAS AND WRAP WITH -9 USING -10 TO SECURE WRAP. 2. SECURE -8 TO CONTAINER AND -2 & -3 TO -4 USING 4d NAILS CONFORMING TO FF-N-105, TYPE II, STYLE 4A OR EQUAL.																																																																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>P/N</th> <th>QTY REQD</th> <th>NOMENCLATURE OR DESCRIPTION</th> <th>SIZE (INCHES UNLESS SPECIFIED)</th> <th>MATERIAL SPECIFICATION</th> </tr> <tr> <td>-11</td> <td>3</td> <td>CHAFFING STRIP</td> <td>AS REQUIRED X 3 X 1/2</td> <td>PPP-P-115 TYPE I OR EQUAL</td> </tr> <tr> <td>-10</td> <td>A/R</td> <td>NYLON TAPE</td> <td>AS REQUIRED X 1/2</td> <td>PPP-T-97 TYPE III</td> </tr> <tr> <td>-9</td> <td>6</td> <td>WRAP</td> <td>AS REQUIRED</td> <td>MIL-B-121 TYPE I GR A, CL 2</td> </tr> <tr> <td>-8</td> <td>8</td> <td>SADDLE BRACES</td> <td>1 X 3(NOM) X 11</td> <td>MIL-STD-731 CLASS 2</td> </tr> <tr> <td>-7</td> <td>1</td> <td>SADDLE</td> <td>2 X 6(NOM) X 19</td> <td>MIL-STD-731 CLASS 2</td> </tr> <tr> <td>-6</td> <td>1</td> <td>SADDLE</td> <td>19 X 4 1/2 X 1 1/2</td> <td>MIL-STD-731 CLASS 2</td> </tr> <tr> <td>-5</td> <td>1</td> <td>SADDLE</td> <td>19 X 6 1/2 X 1 1/2</td> <td>MIL-STD-731 CLASS 2</td> </tr> <tr> <td>-4</td> <td>1</td> <td>SADDLE</td> <td>19 X 5 1/2 X 3/4</td> <td>NN-P-530 GROUP B</td> </tr> <tr> <td>-3</td> <td>1</td> <td>SADDLE SUPPORT</td> <td>5 1/2 X 4 1/2 X 3/4</td> <td>NN-P-530 GROUP B</td> </tr> <tr> <td>-2</td> <td>1</td> <td>SADDLE SUPPORT</td> <td>9 X 5 1/2 X 3/4</td> <td>NN-P-530 GROUP B</td> </tr> <tr> <td>-1</td> <td>2</td> <td>TOP & BOTTOM</td> <td>41 X 20 5/8 X 1/2</td> <td>NN-P-530 GROUP B</td> </tr> </table>					P/N	QTY REQD	NOMENCLATURE OR DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION	-11	3	CHAFFING STRIP	AS REQUIRED X 3 X 1/2	PPP-P-115 TYPE I OR EQUAL	-10	A/R	NYLON TAPE	AS REQUIRED X 1/2	PPP-T-97 TYPE III	-9	6	WRAP	AS REQUIRED	MIL-B-121 TYPE I GR A, CL 2	-8	8	SADDLE BRACES	1 X 3(NOM) X 11	MIL-STD-731 CLASS 2	-7	1	SADDLE	2 X 6(NOM) X 19	MIL-STD-731 CLASS 2	-6	1	SADDLE	19 X 4 1/2 X 1 1/2	MIL-STD-731 CLASS 2	-5	1	SADDLE	19 X 6 1/2 X 1 1/2	MIL-STD-731 CLASS 2	-4	1	SADDLE	19 X 5 1/2 X 3/4	NN-P-530 GROUP B	-3	1	SADDLE SUPPORT	5 1/2 X 4 1/2 X 3/4	NN-P-530 GROUP B	-2	1	SADDLE SUPPORT	9 X 5 1/2 X 3/4	NN-P-530 GROUP B	-1	2	TOP & BOTTOM	41 X 20 5/8 X 1/2	NN-P-530 GROUP B				
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DD FORM 2169 MOD

COMPUTER GENERATED

SPI NO 00-310-9830

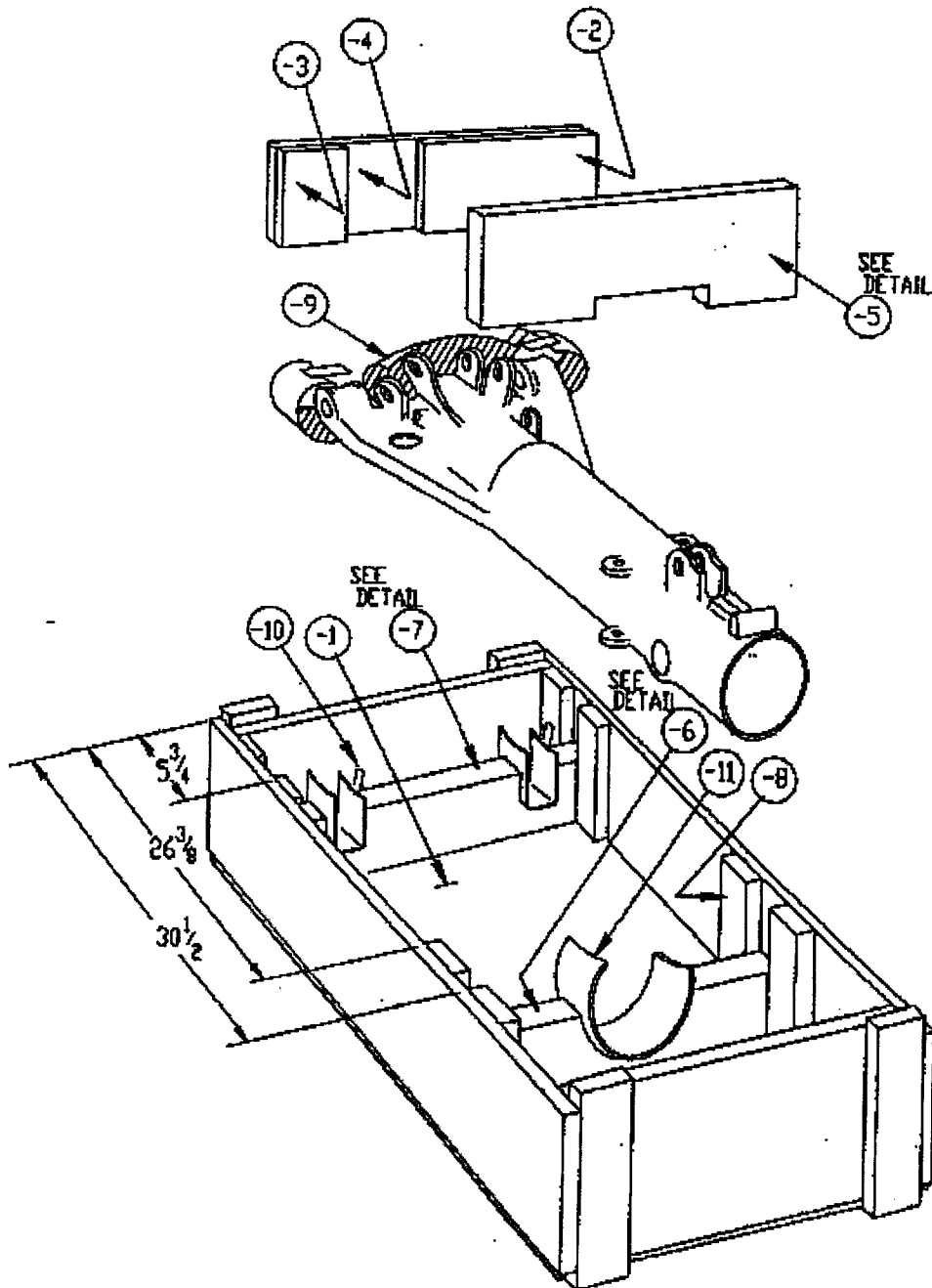
SPECIAL PACKAGING INSTRUCTION

ITEM ID
98747

SPI NO. (TPID)
00-310-9830

ITEM NOMENCLATURE
CYLINDER, LANDING GEAR

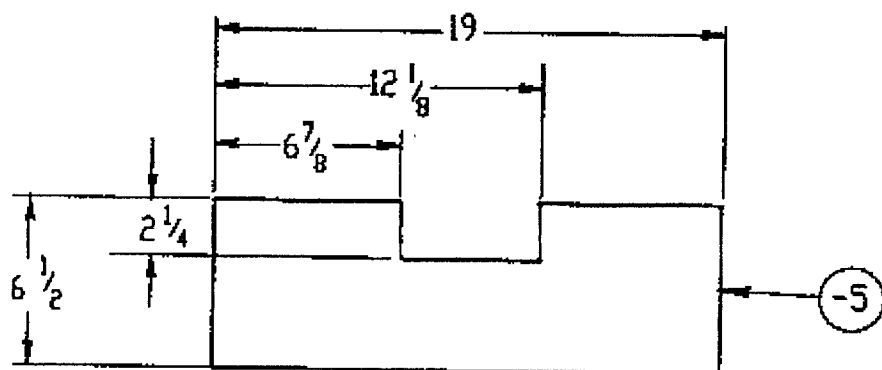
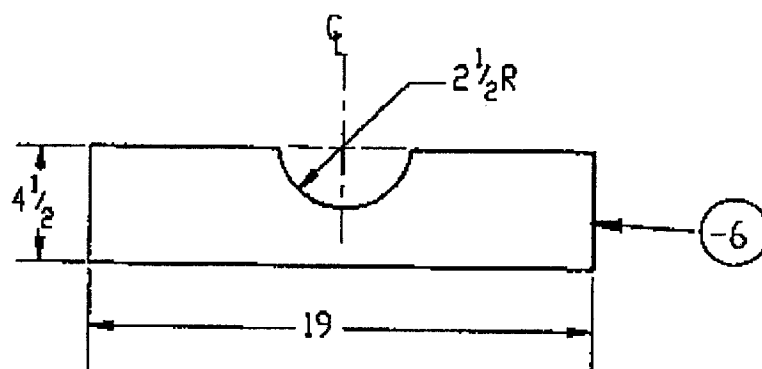
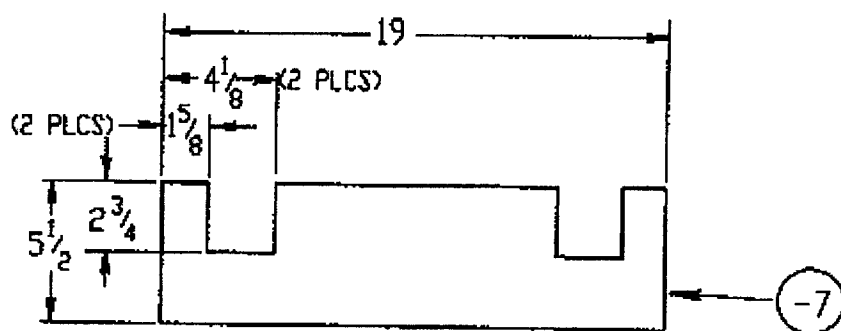
SHEET 2 OF 3



ITEM NOMENCLATURE

CYLINDER, LANDING GEAR

SHEET 3 OF 3



SPECIAL PACKAGING INSTRUCTION

E ID
98747SPI NO. (TPO)
01-233-2153

SHEET 1 OF 3

PART OR DRAWING NO.
68A452602-1001NATIONAL STOCK NO.
1620-01-233-2153CURRENT
REV

ILL. E. NYE

ITEM NOMENCLATURE
CYLINDER ASSEMBLYORIGINAL
DATE
89129CHK. S. MEIER *S. Meier*
ENGR. M. MEDINA *M. Medina*
AUTH. B. EVANS *B. Evans*

PRESERVATION IAW MIL-P-116

LEVEL A METHOD I

LEVEL B METHOD I

LEVEL C METHOD I

QUP 001

ICQ 000

CLEANING METHOD C-1

DRYING METHOD D-1

PRESERVATIVE MIL-G-81322 OR EQUAL

MARKING IAW MIL-STD-129

SPECIAL MARKINGS:

A) SPI NO. 01-233-2153 MARK THE SPI
NUMBER ON ONE SIDE OF THE CONTAINER AND
ON ALL REMOVABLE DUNNAGE.

PACKING AS SPECIFIED BELOW AND BILL OF MATERIALS

LEVEL	SPEC	STYLE	TYPE	CL	VRTY	GR
A	PPP-B-621(MOD)	4		2		A
B	PPP-B-621(MOD)	4		1		B
C	PPP-B-621(MOD)	4		1		B

LEVEL A LEVEL B LEVEL C

GROSS CU FT 6.087 6.087 6.087

GROSS WT LBS 80 80 80

DESIGN FRAGILITY G 110 110 110

LENGTH WIDTH DEPTH

CNTR I.D. 39 1/2 19 1/8 11

CNTR O.D. 42 1/2 20 5/8 12

ITEM DIM 36 1/2 15 1/4 9

ITEM WT LBS 37

REVISIONS

LTR	DESCRIPTION	DATE	APRVD

CLOSURE IN ACCORDANCE WITH PPP-B-621

NOTES:

1. PRESERVE CRITICAL AREAS AND WRAP WITH
-8 USING -9 TO SECURE WRAP.2. SECURE -6 TO CONTAINER USING 4d NAILS
CONFORMING TO FF-N-105, TYPE II, STYLE 4A
OR EQUAL.

-9	3	CHAFFING STRIP	AS REQUIRED X 3 X 1/2	PPP-P-115	TYPE I OR EQUAL
-8	A/R	NYLON TAPE	AS REQUIRED X 1/2	PPP-T-97	TYPE III
-7	A/R	WRAP	AS REQUIRED	MIL-B-121	TYPE I, GR A, CL 2
-6	8	SADDLE BRACES	1 X 3(NOM) X 11	MIL-STD-731	CLASS 2
-5	1	SADDLE	19 X 6 1/2 X 1 1/2	MIL-STD-731	CLASS 2
-4	1	SADDLE	19 X 5 X 1 1/2	MIL-STD-731	CLASS 2
-3	1	SADDLE	19 X 6 X 1 1/2	MIL-STD-731	CLASS 2
-2	1	SUPPORT	19 X 4 1/4 X 1 1/2	MIL-STD-731	CLASS 2
-1	2	TOP & BOTTOM	41 X 20 5/8 X 1/2	NN-P-530	GROUP B
P/N	QTY REQD	NOMENCLATURE OR DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION	

SPI NO.
01-233-2153

SPECIAL PACKAGING INSTRUCTION

CODE ID

98747

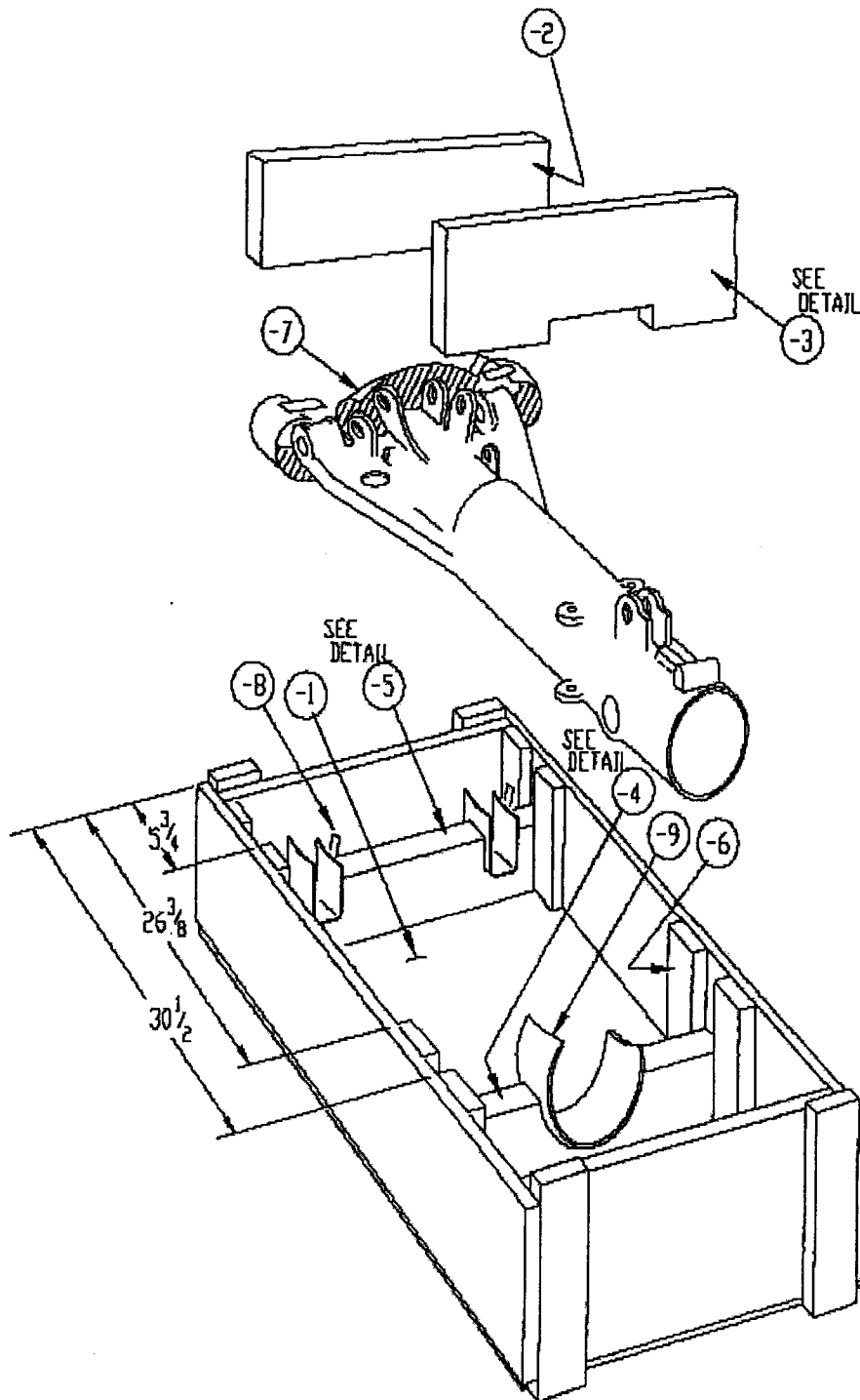
SPI NO. (TPO)

01-233-2153

ITEM NOMENCLATURE

CYLINDER ASSEMBLY

SHEET 2 OF 3



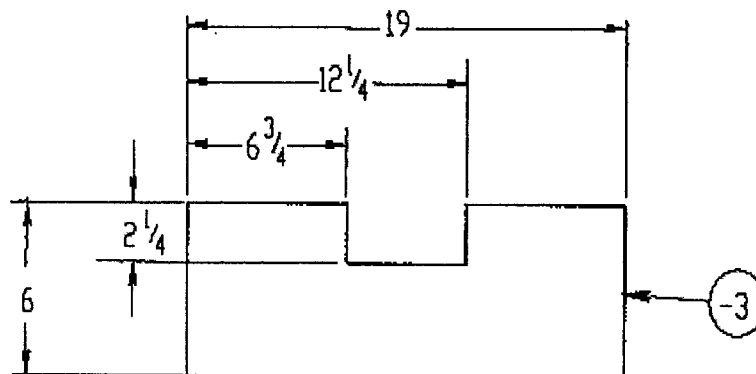
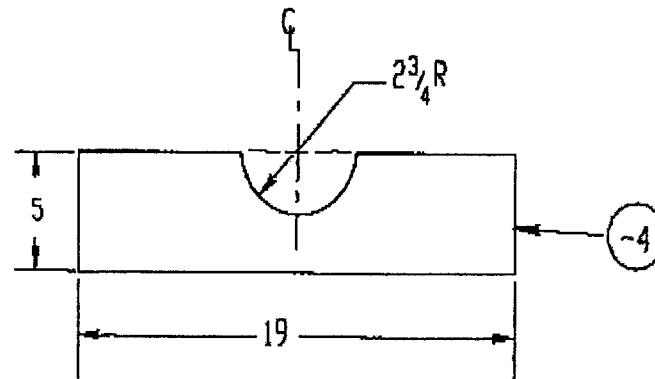
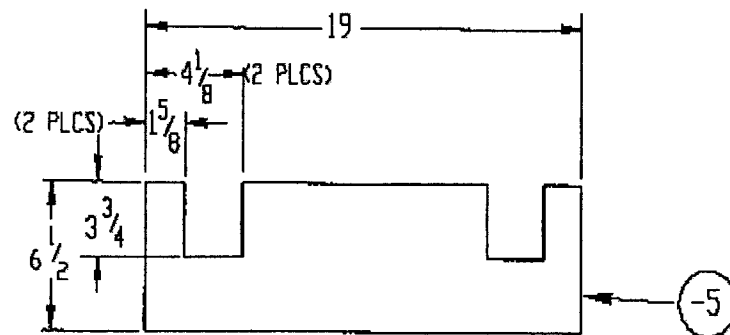
SPECIAL PACKAGING INSTRUCTION

MODE ID
98747

SPI NO. (TFO)
01-233-2153

ITEM NOMENCLATURE
CYLINDER ASSEMBLY

SHEET 3 OF 3



SPECIAL PACKAGING INSTRUCTION			JWE ID 98747	SPI NO. (TPO) 01-235-2927
				SHEET 1 OF 3
PART OR DRAWING NO. 68A412702-1001	NATIONAL STOCK NO. 1620-01-235-2927	CURRENT REV	ILL. E. NYE	
ITEM NOMENCLATURE CYLINDER, MAIN LANDING		ORIGINAL DATE 88060	CHK. S. MEIER ENGR. V. ELIZONDO AUTH. B. EVANS	

PRESERVATION IAW MIL-P-116		PACKING AS SPECIFIED BELOW AND BILL OF MATERIALS			
LEVEL A METHOD I		LEVEL	SPEC	STYLE	TYPE CL VRTY GR
LEVEL B METHOD I		A	MIL-B-26195(MOD)	A	II 1
LEVEL C METHOD I		B	MIL-B-26195(MOD)	A	I 1
QUP 001		C	MIL-B-26195(MOD)	A	I 1
ICQ 000					LEVEL A LEVEL B LEVEL C
CLEANING C-1			GROSS CU FT	9.688	9.688 9.688
DRYING D-1			GROSS WT LBS	120	120 120
PRESERVATIVE MIL-G-81322			DESIGN FRAGILITY G	110	110 110
MARKING IAW MIL-STD-129			LENGTH	WIDTH	DEPTH
SPECIAL MARKINGS:			CNTR I.D.	29	25 15
A) SPI NO. 01-235-2927 MARK THE SPI			CNTR O.D.	31	27 20
NUMBER ON ONE SIDE OF THE CONTAINER AND			ITEM DIM	24 3/4	21 9
ON ALL REMOVABLE DUNNAGE.			ITEM WT LBS	64	
B) CAUTION: LIFT BY BASE ONLY		REVISIONS			
C) TO OPEN REMOVE BOTTOM LAG BOLTS		LTR	DESCRIPTION	DATE	APRVD

CLOSURE IN ACCORDANCE WITH MIL-B-26195

-18	16	CORNER STRAPS	.028 X 3/4 X 12	QQ-S-781	CLASS 1, TYPE II, FIN A
-17	12	WASHERS	1/4 DIA	FF-W-92	TYPE A, GRADE I, CLASS A
-16	12	LAG BOLTS	1/4 X 2 1/2	FF-B-561	TYPE I, STYLE 1, GR B
-15	1	STRAPPING	.035 X 1 1/4 X 29	QQ-S-781	CLASS 1, TYPE I, HVY DUTY, FIN A
-14	1	STRAPPING	.035 X 1 1/4 X 15	QQ-S-781	CLASS 1, TYPE I, HVY DUTY, FIN A
-13	A/R	NYLON TAPE	AS REQUIRED X 3/4	PPP-T-97	TYPE III
-12	1	WRAP	AS REQUIRED	MIL-B-121	TYPE I, GRADE A, CLASS 2
-11	3	CHAFFING STRIPS	AS REQUIRED X 3 X 1/4	PPP-P-115	TYPE I OR EQUAL
-10	9	NUTS	3/8 DIA	FF-N-836	TYPE II, STYLE 4 (HEX)
-9	9	WASHERS	3/8 DIA	FF-W-92	TYPE A, GRADE I, CLASS A
-8	5	TORQUE WASHERS	TO FIT 3/8 BOLT	MS-98398	SEE NOTE 1
-7	4	BOLTS	3/8 X 6	FF-B-584	TYPE I, CLASS 1, STYLE A
-6	5	BOLTS	3/8 X 5	FF-B-584	TYPE I, CLASS 1, STYLE A
-5	1	BASE	29 X 25 X 1/2	NN-P-530	GROUP B
-4	1	SADDLE	2 X 4(NOM) X 25	MIL-STD-731	CLASS 2
-3	1	SADDLE	2 X 4(NOM) X 13 1/2	MIL-STD-731	CLASS 2
-2	2	HEADERS	2 X 2(NOM) X 29	MIL-STD-731	CLASS 2
-1	2	SKIDS	4 X 4(NOM) X 27	MIL-STD-731	CLASS 2
P/N	QTY REQD	NOMENCLATURE OR DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION	

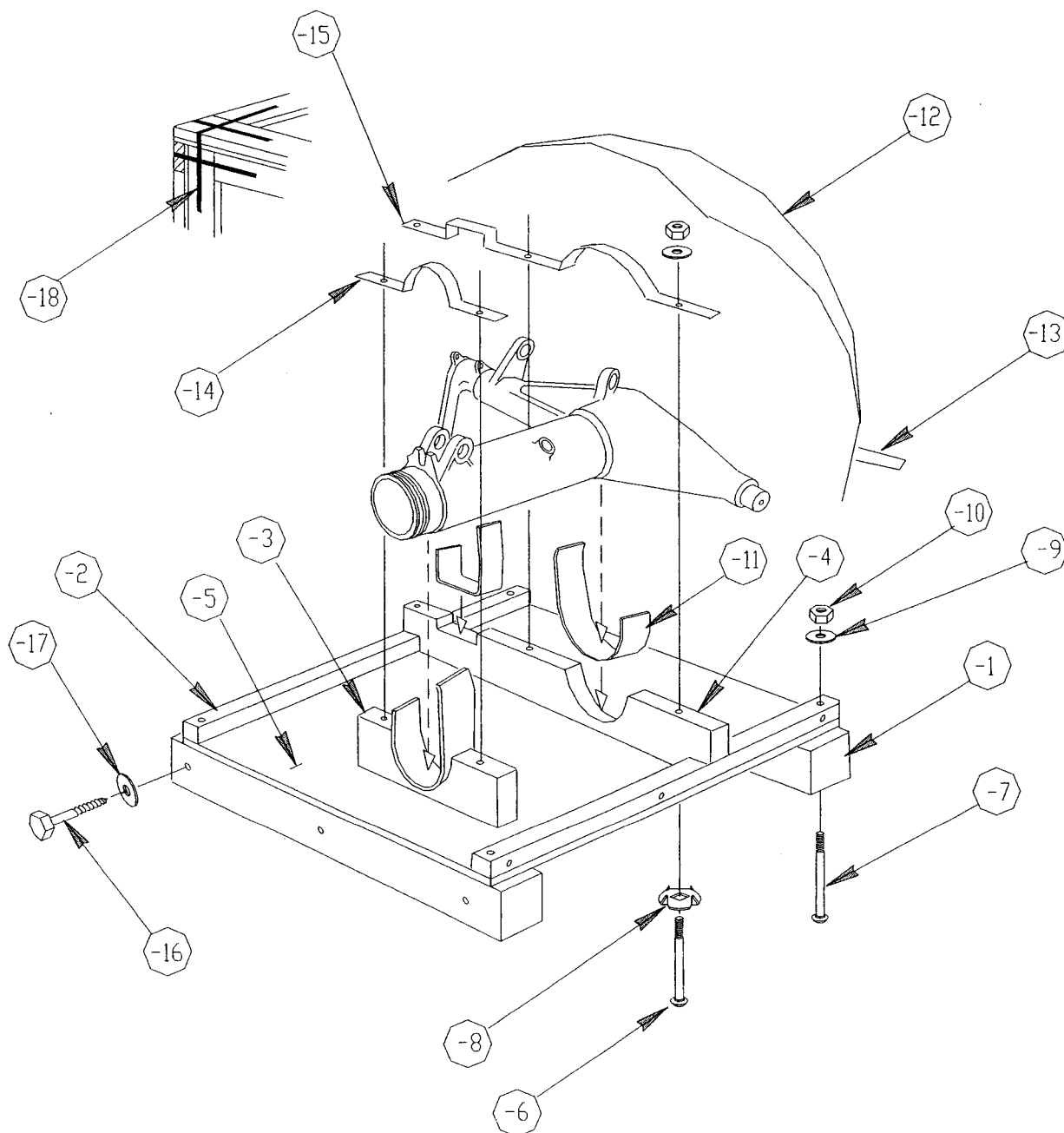
SPECIAL PACKAGING INSTRUCTION

DE ID
98747

SPI NO. (TPD)
01-235-2927

ITEM NOMENCLATURE
CYLINDER, MAIN LANDING

SHEET 2 OF 3



SPECIAL PACKAGING INSTRUCTION

FILE ID

98747

SPI NO. (TPO)

01-235-2927

ITEM NOMENCLATURE

CYLINDER, MAIN LANDING

SHEET 3 OF 3

NOTES:

1. SOURCE OF SUPPLY FOR TORQUE WASHERS,
CATALOG NO. MS-98398: CARR FASTENER CO.
31 AMES ST
CAMBRIDGE MASS. 02142

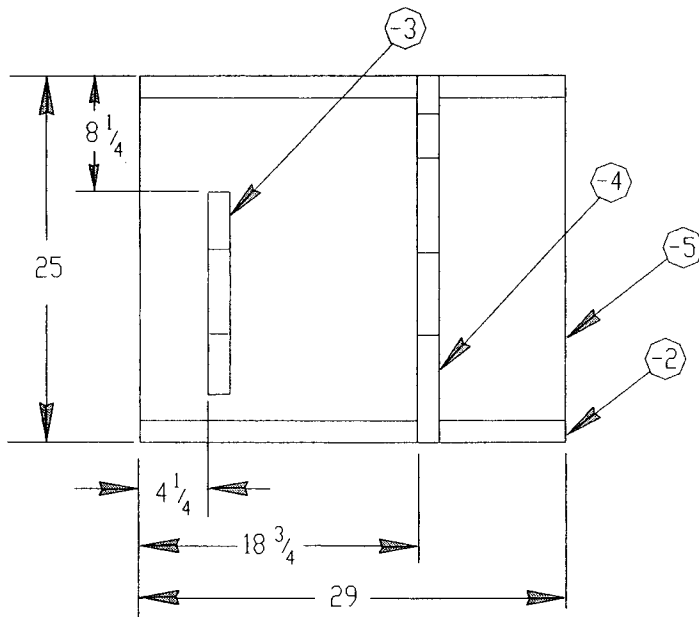
2. UNLESS OTHERWISE SPECIFIED, DIMENSIONS
WILL BE IN INCHES. TOLERANCES: $\pm 1/16$

3. PRESERVE CRITICAL AREAS WITH MIL-G-81322
OR EQUAL. WRAP WITH -12 USING -13 AS REQUIRED
TO SECURE WRAP.

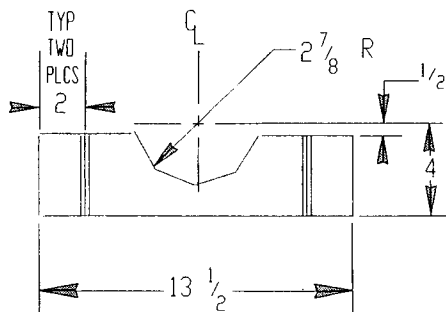
4. CHAFFING STRIP, -11, SHALL BE USED AT ALL
POINTS WHERE ITEM CONTACTS WOOD BLOCKING AND
METAL STRAPPING. CHAFFING STRIPS SHALL BE
HELD IN PLACE WITH STAPLES, FF-N-105, TYPE III,
STYLE 3. SIZE OF STAPLES SHALL BE: 1/2" CROWN,
14 GAGE, 1 1/2" LENGTH.

5. USE -18, CORNER STRAPPING ON LEVEL A PACK
ONLY.

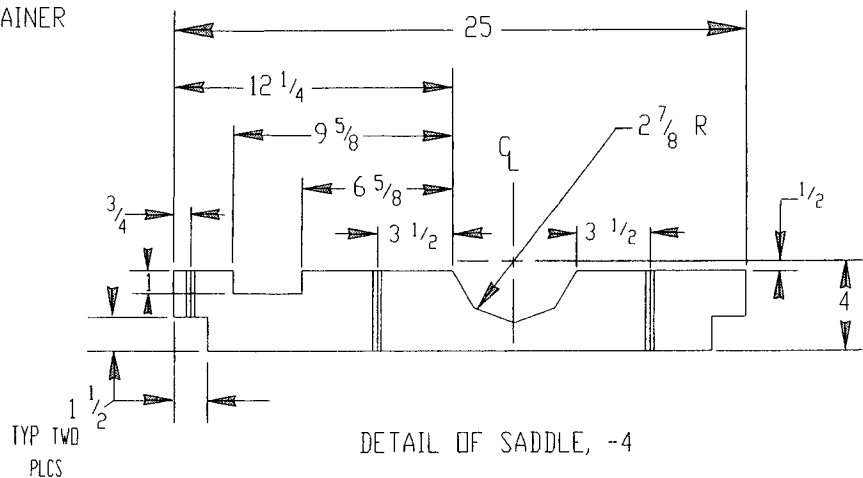
6. JOISTS WILL BE PROVIDED IN SUPERSTRUCTURE
IN ACCORDANCE WITH MIL-B-26195.



DETAIL, SHOWING POSITIONING OF
BLOCKING ON BASE OF CONTAINER



DETAIL OF SADDLE, -3



DETAIL OF SADDLE, -4

SPECIAL PACKAGING INSTRUCTION				CODE ID 98747	SPI NO. (TPO) F01-232-9310																																																																																
PART OR DRAWING NO. 68A452704-1003		NATIONAL STOCK NO. 1620-01-232-9310		SHEET 1 OF 4																																																																																	
ITEM NOMENCLATURE PISTON ASSEMBLY, NOSE LANDING GEAR F-15		CURRENT REV A		ILL. C. CHARBONEAU CHK. T. ZIMMERMAN ENGR. M. STEPHENS AUTH. P. FRANCIS																																																																																	
ORIGINAL DATE 89139		MILITARY PRESERVATION IAW MIL-STD-2073 PACKING AS SPECIFIED BELOW AND BILL OF MATERIALS																																																																																			
SERVICEABLE METHOD: 20 UNSERVICEABLE METHOD: 20 QUP 001 ICQ 000		<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">LEVEL</th> <th style="text-align: left;">SPEC</th> <th style="text-align: left;">STYLE</th> <th style="text-align: left;">TYPE</th> <th style="text-align: left;">CL</th> <th style="text-align: left;">VRTY</th> <th style="text-align: left;">GR</th> <th style="text-align: left;">TR</th> </tr> <tr> <td>A</td> <td>ASTM-D6256</td> <td>A</td> <td>1</td> <td>2</td> <td></td> <td></td> <td>B</td> </tr> <tr> <td>B</td> <td>ASTM-D6256</td> <td>A</td> <td>1</td> <td>1</td> <td></td> <td></td> <td>A</td> </tr> </table>				LEVEL	SPEC	STYLE	TYPE	CL	VRTY	GR	TR	A	ASTM-D6256	A	1	2			B	B	ASTM-D6256	A	1	1			A																																																								
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CLEANING & DRYING: IAW MIL-STD-2073 PRESERVATIVE: MIL-C-16173, GRADE 2		<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">LEVEL A</th> <th style="text-align: left;">LEVEL B</th> </tr> <tr> <td>GROSS CU FT 8.726</td> <td>GROSS CU FT 8.726</td> </tr> <tr> <td>GROSS WT LBS 118</td> <td>GROSS WT LBS 118</td> </tr> <tr> <td>DESIGN FRAGILITY G 110</td> <td>DESIGN FRAGILITY G 110</td> </tr> </table>				LEVEL A	LEVEL B	GROSS CU FT 8.726	GROSS CU FT 8.726	GROSS WT LBS 118	GROSS WT LBS 118	DESIGN FRAGILITY G 110	DESIGN FRAGILITY G 110																																																																								
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SPI NO. F01-232-9310

<h1 style="margin: 0;">SPECIAL PACKAGING INSTRUCTION</h1>		CODE ID 98747	SPI NO. (TPD) F01-232-9310	
ITEM NOMENCLATURE PISTON ASSEMBLY, NOSE LANDING GEAR F-15			SHEET 2 OF 4	
<p>EUROPEAN UNION (EU) REQUIREMENTS NOTICES</p> <p>NOTICE 1: LUMBER AND PACKAGING/CONTAINER STATEMENT - "ALL WOODEN LUMBER CONTAINERS PRODUCED ENTIRELY OR IN PART OF NON-MANUFACTURED SOFTWOOD SPECIES SHALL BE CONSTRUCTED FROM HEAT TREATED (HT) MATERIAL (HT TO 56 DEGREES CENTIGRADE OR 133 DEGREES FAHRENHEIT FOR 30 MINUTES). CERTIFICATION IS REQUIRED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC). CONSTRUCTION AND CERTIFICATION SHALL BE IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS, BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT WWW.APHIS.USDA.GOV.</p> <p>NOTICE 2: WOODEN PALLET STATEMENT - "ALL WOODEN PALLETS PRODUCED ENTIRELY OR IN PART OF NON-MANUFACTURED SOFTWOOD SPECIES SHALL BE CONSTRUCTED FROM HEAT TREATED (HT) MATERIAL (HT TO 56 DEGREES CENTIGRADE OR 133 DEGREES FAHRENHEIT FOR 30 MINUTES). CERTIFICATION IS REQUIRED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC). CONSTRUCTION AND CERTIFICATION SHALL BE IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS, BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT WWW.APHIS.USDA.GOV.</p> <p>NOTICE 3: HARDWOOD SPECIES STATEMENT - "ALL WOODEN PALLETS PRODUCED ENTIRELY OF NON-MANUFACTURED HARDWOOD SPECIES SHALL BE IDENTIFIED BY A PERMANENT MARKING OF "NC" (NON-CONIFEROUS), 1.25 INCHES OR GREATER IN HEIGHT, ACCOMPANIED BY THE CAGE CODE OF THE CONTRACTED MANUFACTURER AND THE MONTH AND YEAR OF THE CONTRACT. ON PALLETS, THE MARKING SHALL BE APPLIED TO THE STRINGER OR BLOCK ON OPPOSITE SIDES AND ENDS OF THE PALLET AND BE CONTRASTING AND CLEARLY VISIBLE."</p> <p>NOTES</p> <ol style="list-style-type: none"> 1. PRESERVE CRITICAL AREAS WITH MIL-C-16173, GRADE 2 AND WRAP WITH REF -17. SECURE WRAP WITH REF -19 AS REQUIRED. 2. CHAFFING STRIP, REF -16, OR CUSHIONING, REF -18, SHALL BE USED AT ALL POINTS WHERE ITEM WOULD CONTACT WOOD BLOCKING AND METAL STRAPPING. SECURE CHAFFING STRIP TO SADDLES USING STAPLES CONFORMING TO FF-N-105, TYPE III, STYLE 3, 1/2 INCH CROWN, 14 GAGE, 1/2 INCH LENGTH OR EQUAL. 3. POSITION REF -8 ON TOP OF REF -7 AND REF -5 ON TOP OF REF -8. ATTACH ALL THREE TO REF -6 AND END SKID USING 10d NAILS CONFORMING TO FF-N-105, TYPE II, STYLE 4A OR EQUAL. 4. APPLY CORNER STRAPS, REF -21, TO LEVEL A PACK ONLY, USING 3d NAILS CONFORMING TO FF-N-105, TYPE II, STYLE 7. 				
P/N	QTY REQD	NOMENCLATURE DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION
-21	16	CORNER STRAPS	.028 X 3/4 X 12	ASTM-D3953 TYPE 2, FINISH A
-20	2	STRAPPING	.035 X 1 1/4 X 12	ASTM-D3953 TYPE 1, REG DUTY, FIN A
-19	A/R	TAPE	A/R X 1/2	ASTM-D5330 TYPE IV
-18	1	CUSHION WRAP	24 X 10 X 1/8	PPP-C-1797 TYPE I
-17	1	WRAP	36 X 13 1/2	MIL-PRF-121 TYPE I, GRADE A, CLASS 2
-16	2	CHAFFING STRIP	15 X 3 X 1/4	PPP-P-115 TYPE I OR EQUAL

SPECIAL PACKAGING INSTRUCTION

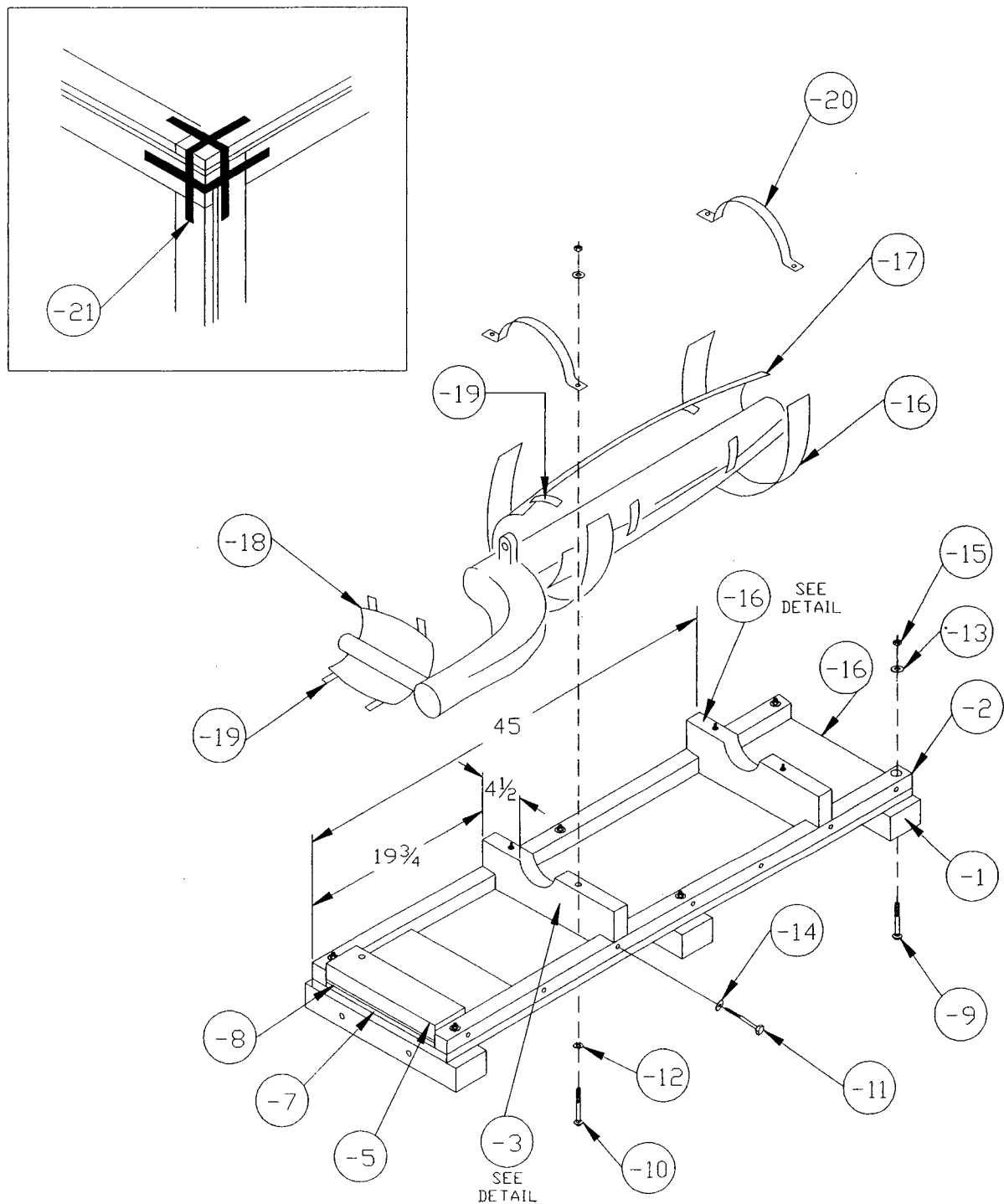
CODE ID
98747

SPI NO. (TPO)
F01-232-9310

ITEM NOMENCLATURE

PISTON ASSEMBLY, NOSE LANDING GEAR F-15

SHEET 3 OF 4



<p>SPECIAL PACKAGING INSTRUCTION</p>	<p>CODE ID 98747</p>	<p>SPI NO. (TPO) F01-232-9310</p>
<p>ITEM NOMENCLATURE PISTON ASSEMBLY, NOSE LANDING GEAR F-15</p>		<p>SHEET 4 OF 4</p>

SPECIAL PACKAGING INSTRUCTION

CODE
98747

SPI NO. (TPD)
01-236-3518

SHEET 1 OF 3

PART OR DRAWING NO.
68A412702-1002

NATIONAL STOCK NO.
1620-01-236-3518

CURRENT
REV

ILL. E. NYE *E. Nye*

ITEM NOMENCLATURE
CYLINDER, MAIN LANDING

ORIGINAL
DATE
88067

CHK. S. MEIER *S. Meier*
ENGR. V. ELIZONDO *V. Elizondo*
AUTH. B. EVANS *B. Evans*

PRESERVATION IAW MIL-P-116

LEVEL A METHOD I
LEVEL B METHOD I
LEVEL C METHOD I
DUP 001
ICD 000
CLEANING C-1
DRYING D-1
PRESERVATIVE MIL-G-81322

MARKING IAW MIL-STD-129

SPECIAL MARKINGS:
A) SPI NO. 01-236-3518 MARK THE SPI
NUMBER ON ONE SIDE OF THE CONTAINER AND
ON ALL REMOVABLE DUNNAGE.
B) CAUTION: LIFT BY BASE ONLY
C) TO OPEN REMOVE BOTTOM LAG BOLTS

PACKING AS SPECIFIED BELOW AND BILL OF MATERIALS

LEVEL	SPEC	STYLE	TYPE	CL	VRTY	GR
A	MIL-B-26195(MOD)	A	II	1		
B	MIL-B-26195(MOD)	A	I	1		
C	MIL-B-26195(MOD)	A	I	1		

	LEVEL A	LEVEL B	LEVEL C
GROSS CU FT	9.688	9.688	9.688
GROSS WT LBS	120	120	120
DESIGN FRAGILITY G	110	110	110
LENGTH			
WIDTH			
DEPTH			
CNTR I.D.	29	25	15
CNTR O.D.	31	27	20
ITEM DIM	24 3/4	21	9
ITEM WT LBS	64		

REVISIONS

LTR	DESCRIPTION	DATE	APRVD

CLOSURE IN ACCORDANCE WITH MIL-B-26195

-18	16	CORNER STRAPS	.020 X 3/4 X 12	QQ-S-781	CLASS I, TYPE II, FIN A
-17	12	WASHERS	1/4 DIA	FF-W-92	TYPE A, GRADE I, CLASS A
-16	12	LAG BOLTS	1/4 X 2 1/2	FF-B-561	TYPE I, STYLE I, GR B
-15	1	STRAPPING	.035 X 1 1/4 X 29	QQ-S-781	CLASS I, TYPE I, HVY DUTY, FIN A
-14	1	STRAPPING	.035 X 1 1/4 X 15	QQ-S-781	CLASS I, TYPE I, HVY DUTY, FIN A
-13	A/R	NYLON TAPE	AS REQUIRED X 3/4	PPP-T-97	TYPE III
-12	1	WRAP	AS REQUIRED	MIL-B-121	TYPE I, GRADE A, CLASS 2
-11	3	CHAFFING STRIPS	AS REQUIRED X 3 X 1/4	PPP-P-115	TYPE I OR EQUAL
-10	9	NUTS	3/8 DIA	FF-N-836	TYPE II, STYLE 4 (HEX)
-9	9	WASHERS	3/8 DIA	FF-W-92	TYPE A, GRADE I, CLASS A
-8	5	TORQUE WASHERS	TO FIT 3/8 BOLT	MS-98398	SEE NOTE 1
-7	4	BOLTS	3/8 X 6	FF-B-584	TYPE I, CLASS I, STYLE A
-6	5	BOLTS	3/8 X 5	FF-B-584	TYPE I, CLASS I, STYLE A
-5	1	BASE	29 X 25 X 1/2	NN-P-530	GROUP B
-4	1	SADDLE	2 X 4(NOM) X 25	MIL-STD-731	CLASS 2
-3	1	SADDLE	2 X 4(NOM) X 13 1/2	MIL-STD-731	CLASS 2
-2	2	HEADERS	2 X 2(NOM) X 29	MIL-STD-731	CLASS 2
-1	2	SKIDS	4 X 4(NOM) X 27	MIL-STD-731	CLASS 2

SPI NO. 01-236-2927

P/M	QTY REQD	NOMENCLATURE OR DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION
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DD FORM 2169 MOD

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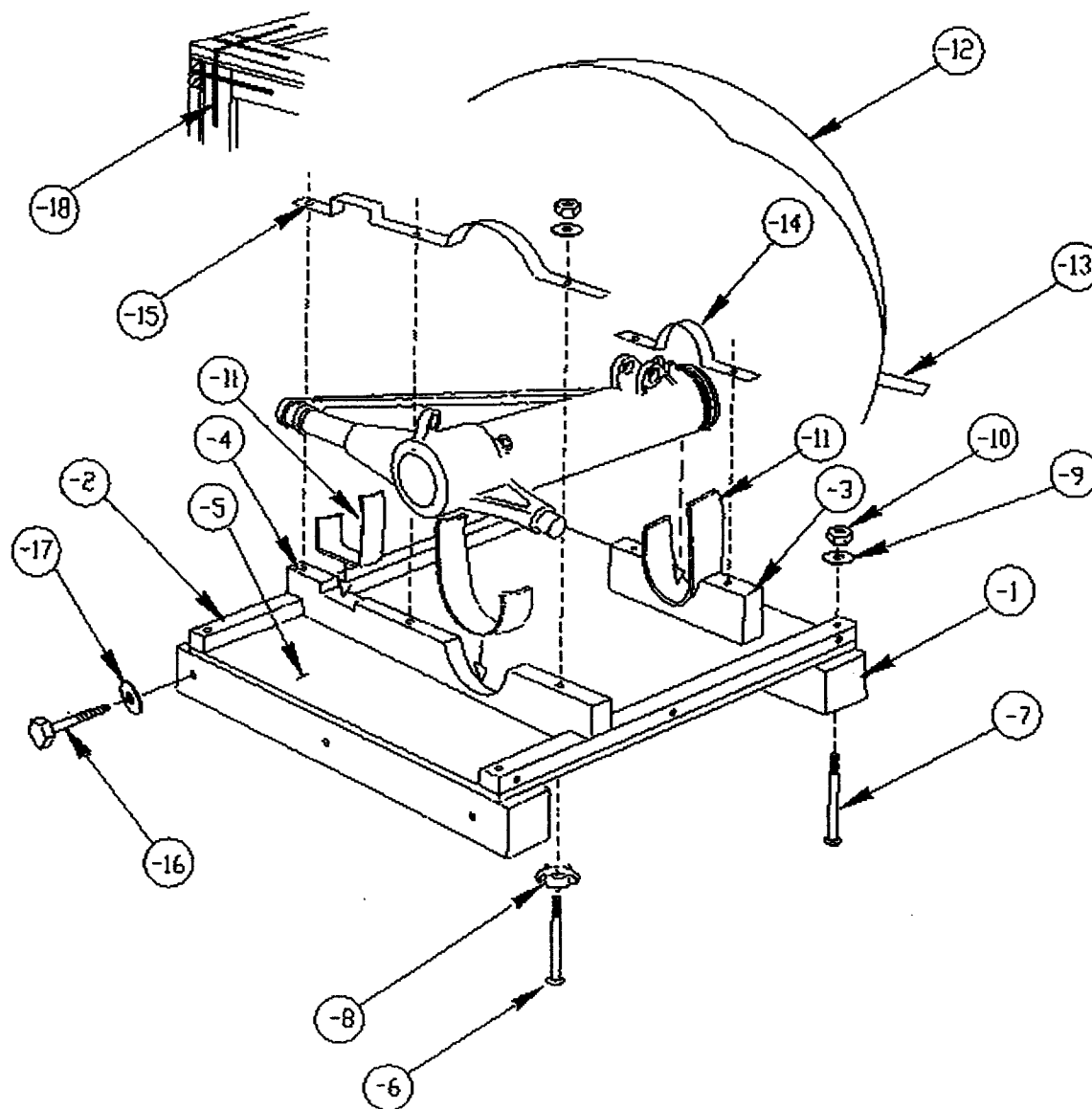
SPECIAL PACKAGING INSTRUCTION

COM CITE
98747

SPI NO. (TPD)
01-236-3518

ITEM NOMENCLATURE
CYLINDER, MAIN LANDING

SHEET 2 OF 3



SPECIAL PACKAGING INSTRUCTION

CONF
98747

SPI NO. (TPN)
01-236-3518

ITEM NOMENCLATURE
CYLINDER, MAIN LANDING

SHEET 3 OF 3

NOTES:

1. SOURCE OF SUPPLY FOR TORQUE WASHERS,
CATALOG NO. MS-98398: CARR FASTENER CO.
31 AMES ST
CAMBRIDGE MASS. 02142

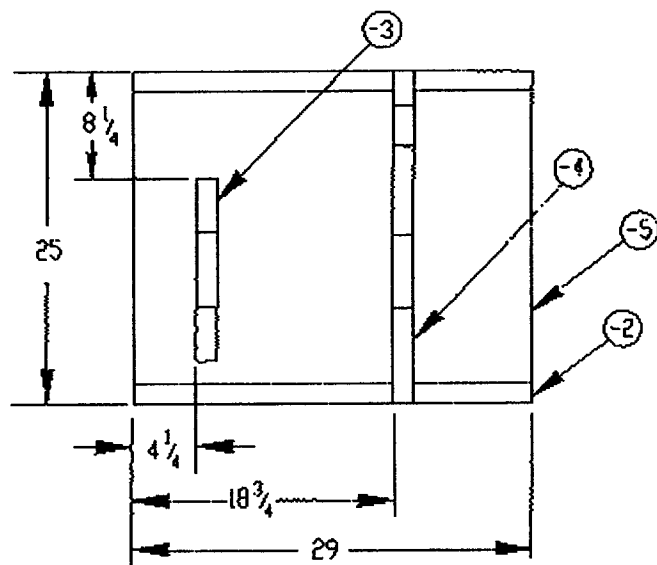
2. UNLESS OTHERWISE SPECIFIED, DIMENSIONS
WILL BE IN INCHES. TOLERANCES: $\pm 1/16$

3. PRESERVE CRITICAL AREAS WITH MIL-G-81322
OR EQUAL. WRAP WITH -12 USING -13 AS REQUIRED
TO SECURE WRAP.

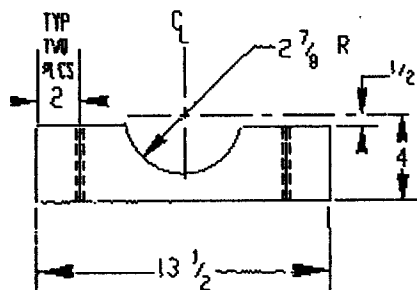
4. CHAFFING STRIP, -11, SHALL BE USED AT ALL
POINTS WHERE ITEM CONTACTS WOOD BLOCKING AND
METAL STRAPPING. CHAFFING STRIPS SHALL BE
HELD IN PLACE WITH STAPLES, FF-N-105, TYPE III,
STYLE 3. SIZE OF STAPLES SHALL BE: 1/2" CROWN,
14 GAGE, 1/2" LENGTH.

5. USE -18, CORNER STRAPPING ON LEVEL A PACK
ONLY.

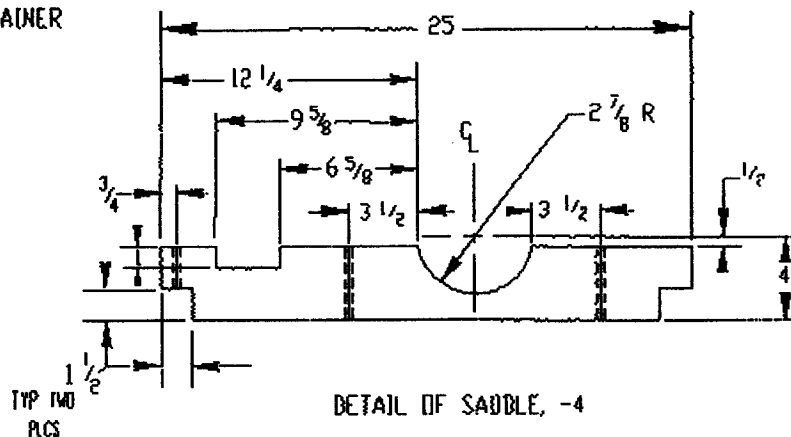
6. JOISTS WILL BE PROVIDED IN SUPERSTRUCTURE
IN ACCORDANCE WITH MIL-B-26195.



DETAIL SHOWING POSITIONING OF
BLOCKING ON BASE OF CONTAINER



DETAIL OF SADDLE, -3



DETAIL OF SADDLE, -4

<h2 style="margin: 0;">SPECIAL PACKAGING INSTRUCTION</h2>			CODE ID 98747	SPI NO. (TPD) F01-071-0534 SHEET 1 OF 2																																																											
PART OR DRAWING NO. 2006644-103	NATIONAL STOCK NO. 1620-01-071-0534	CURRENT REV	ILL. P. ELLISON CHK. S. EDWARDS ENGR. K.W. OLSON AUTH. A. BRIMHALL																																																												
ITEM NOMENCLATURE PISTON, LANDING GEAR		ORIGINAL DATE 99088																																																													
MILITARY PRESERVATION IAW: MIL-STD-2073 SERVICEABLE METHOD : 20 UNSERVICEABLE METHOD : 20 QUP 001 ICQ 000 CLEANING & DRYING IAW: MIL-STD-2073 PRESERVATIVE MIL-PRF-16173, GRADE 2, CODE 02			PACKING AS SPECIFIED BELOW AND BILL OF MATERIALS <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">LEVEL</th> <th style="text-align: left;">SPEC</th> <th style="text-align: left;">STYLE</th> <th style="text-align: left;">TYPE</th> <th style="text-align: left;">CL</th> <th style="text-align: left;">VRTY</th> <th style="text-align: left;">GR</th> </tr> <tr> <td>A</td> <td>PPP-B-621</td> <td>4</td> <td></td> <td></td> <td></td> <td>A</td> </tr> <tr> <td>B</td> <td>ASTM-D5118</td> <td>RSC</td> <td></td> <td></td> <td></td> <td>WSC</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">LEVEL: A</th> <th style="text-align: left;">LEVEL B</th> </tr> <tr> <td>GROSS CU FT</td> <td>1.87</td> </tr> <tr> <td>GROSS WT LBS</td> <td>30</td> </tr> <tr> <td>DESIGN FRAGILITY G</td> <td>100</td> </tr> <tr> <td>LENGTH</td> <td>100</td> </tr> <tr> <td>WIDTH</td> <td>12</td> </tr> <tr> <td>DEPTH</td> <td>6 1/2</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <td>CNTR I.D.</td> <td>24</td> <td>12</td> <td>6 1/2</td> </tr> <tr> <td>CNTR O.D.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>LEVEL A:</td> <td>28</td> <td>14</td> <td>8 1/2</td> </tr> <tr> <td>LEVEL B:</td> <td>24 3/8</td> <td>12 3/8</td> <td>7 1/4</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <td>ITEM DIM</td> <td>19 1/4</td> <td>9 3/4</td> <td>4 1/2</td> </tr> <tr> <td>ITEM WT LBS</td> <td>20</td> <td></td> <td></td> </tr> </table>		LEVEL	SPEC	STYLE	TYPE	CL	VRTY	GR	A	PPP-B-621	4				A	B	ASTM-D5118	RSC				WSC	LEVEL: A	LEVEL B	GROSS CU FT	1.87	GROSS WT LBS	30	DESIGN FRAGILITY G	100	LENGTH	100	WIDTH	12	DEPTH	6 1/2	CNTR I.D.	24	12	6 1/2	CNTR O.D.				LEVEL A:	28	14	8 1/2	LEVEL B:	24 3/8	12 3/8	7 1/4	ITEM DIM	19 1/4	9 3/4	4 1/2	ITEM WT LBS	20		
LEVEL	SPEC	STYLE	TYPE	CL	VRTY	GR																																																									
A	PPP-B-621	4				A																																																									
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MARKING IAW MIL-STD-129 SPECIAL MARKINGS: A) SPI NO. F01-071-0534 *MARK THE SPI NUMBER ON THE ONE SIDE OF THE CONTAINER MARK REUSABLE CONTAINER DO NOT DESTROY			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="3" style="text-align: center;">REVISIONS</th> </tr> <tr> <th style="width: 10%;">LTR</th> <th style="width: 70%;">DESCRIPTION</th> <th style="width: 20%;">DATE</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>		REVISIONS			LTR	DESCRIPTION	DATE																																																					
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CLOSURE LEVEL A: IAW: PPP-B-621 LEVEL B: IAW: ASTM-D1974			CAUTION NOTICE 1 THIS PISTON HAS A HISTORY OF CORROSION. INSURE THE PRESERVATIVE IS APPLIED AS INSTRUCTED IN NOTE 1. 2 GREASE SERTS ARE TO BE REMOVED, PLACED IN A POLY BAG AND ATTACHED TO AN AREA THAT WILL NOT CAUSE CORROSION WITH THE USE OF A STRING OR SIMILAR METHOD.																																																												
NOTES 1 APPLY MIL-C-16173, GRADE 2 PRESERVATIVE ON ALL BARE METAL SURFACES, INCLUDING INSIDE THE HOLLOW TUBE OF THE PISTON LANDING GEAR. INSURE ALL SURFACES ARE COMPLETELY COVERED. WRAP PRESERVED EXPOSED SURFACES WITH -3 WRAP AND SECURE IN PLACE WITH A-A-883 TAPE -9 OR EQUAL. 2 WRAP AND CUSHION PISTON WITH MICROFOAM -7 AND FILL ALL VOIDS SO ITEM IS PACKED VERY SNUG.																																																															
-10	A/R	TAPE	A/R X 3	ASTM-D5486 OR EQUAL																																																											
-9	A/R	TAPE	A/R X 1	A-A-883 TYPE I OR TYPE II																																																											
-8	1	PLATTEN	12 X 6 1/2 X 1/8	ASTM-D4727 CF, DOM, SW, GR 200																																																											
-7	A/R	CUSHIONING	A/R	PPP-C-1797 TYPE 1																																																											
-6	2	SIDE PADS	19 1/2 X 4 1/2 X 1	A-A-59135 CLASS I, GRADE A																																																											
-5	2	TOP & BOTTOM PADS	19 1/2 X 12 X 1	A-A-59135 CLASS I, GRADE A																																																											
-4	2	END PADS	12 X 6 1/2 X 2	A-A-59135 CLASS I, GRADE A																																																											
-3	A/R	WRAP	A/R	MIL-PRF-121 TY I, GR. A, H.D.																																																											
-2	1	STRING	A/R	ANY SUITABLE VARIETY																																																											
-1	1	POLY BAG	4 X 4 X A/R	L-P-378 TYPE I, CL I, GR. A, FIN. I																																																											
P/N	QTY REQD	NOMENCLATURE DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION REVISIONS																																																											

SPI NO. F01-071-0534

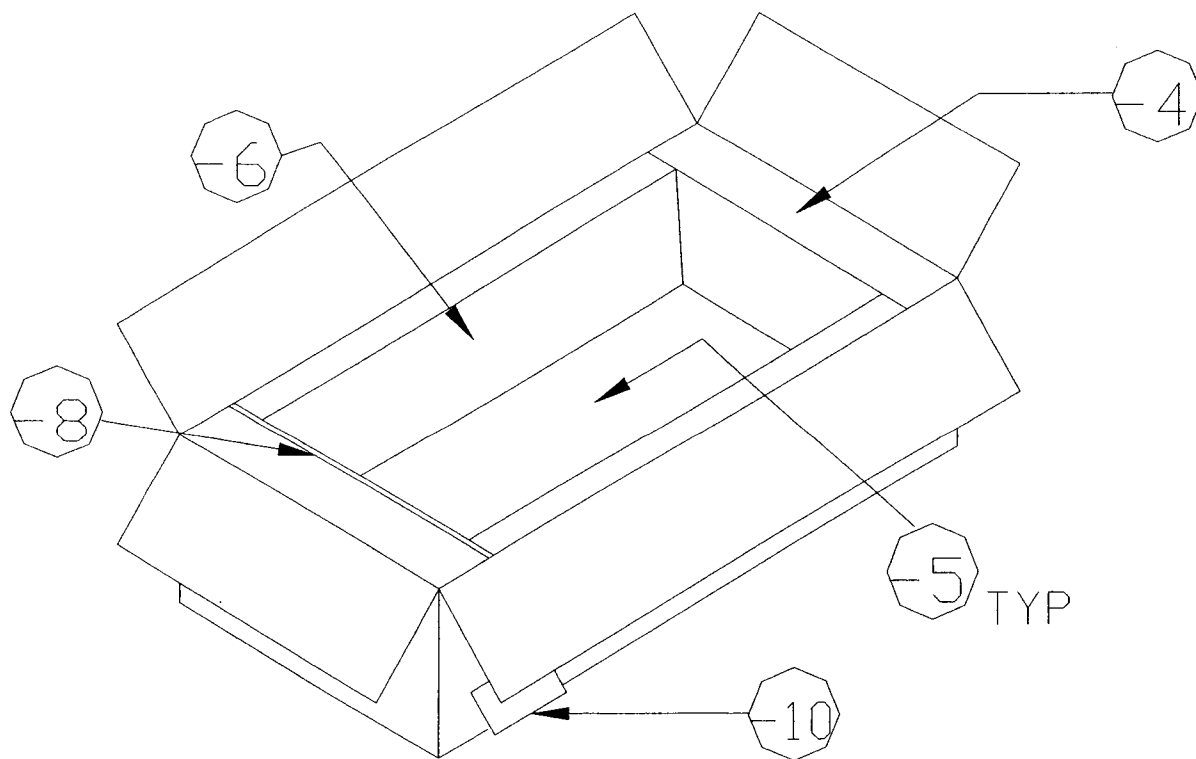
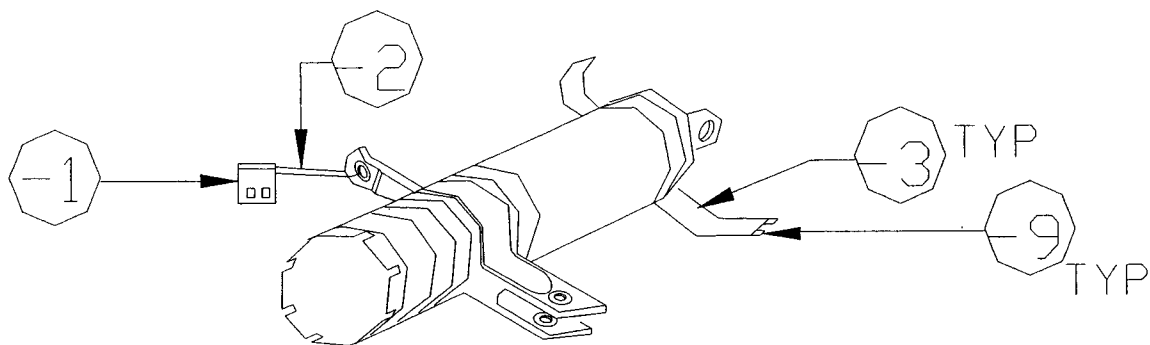
SPECIAL PACKAGING INSTRUCTION

CODE ID
98747

SPI NO. (TPD)
F01-071-0534

ITEM NOMENCLATURE
PISTON, LANDING GEAR

SHEET 2 OF 2



PG 191

SHEET 1 OF 1

PART OR DRAWING NO. P/N 2007106-103	NATIONAL STOCK NO. 1620-01-253-1350	CURRENT REV	ILL. D. HEISE
ITEM NOMENCLATURE PISTON ASBLY, OUTER		ORIGINAL DATE 89047	CHK. S. MEIER ENGR. V. ELIZONDO AUTH. B. EVANS

PRESERVATION IAW MIL-P-116

PACKING AS SPECIFIED BELOW AND BILL OF MATERIALS

LEVEL A METHOD I	LEVEL SPEC	STYLE	TYPE	CL	VRTY	GR
LEVEL B METHOD I	A PPP-B-621 (MOD)	4		2		A
LEVEL C METHOD I (REPARABLES)	B PPP-B-636	RSC				V3C
DUP 001	C PPP-B-636	RSC	CF	DDM	SW	175
ICQ 000	LEVEL A LEVEL B LEVEL C					
CLEANING C-1	GROSS CU FT	1.129	.928	.928		
DRYING B-1	GROSS WT LBS	29	19	19		
PRESERVATIVE MIL-G-81322	DESIGN FRAGILITY G	110	110	110		

MARKING IAW MIL-STD-129

SPECIAL MARKINGS:

A) SPI NO. 01-253-1350

HARK THE SPI NUMBER ON ONE SIDE OF THE CONTAINER AND ON ALL REMOVABLE DUNNAGE.

LENGTH			WIDTH			DEPTH		
CNTNR I.D.	28		8		6			
CNTNR O.D.								
LEVEL A	31		9 1/2		6 5/8			
LEVEL B & C	28 3/8		8 3/8		6 3/4			
ITEM DIM	23		7 1/4		4 1/2			
ITEM WT LBS	17							

CLOSURE LEVEL A: IAW PPP-B-621

LEVEL B: METHOD V AND REINFORCED IAW PARA 30.5.2 AND 30.5.2.1 OF PPP-B-636.

LEVEL C: METHOD II AND REINFORCED WHEN REQUIRED IAW PARA 30.5.1 OF PPP-B-636.

NOTES:

1. PRESERVE CRITICAL AREAS WITH MIL-G-81322 OR EQUAL. WRAP IN REF-1 AND SECURE WITH REF-2.

2. USE REF-3 OR EQUAL AS REQUIRED TO COMPLETELY ENCLOSE ITEM AND CREATE A SNUG FIT IN CONTAINER.

REVISIONS			
LTR	DESCRIPTION	DATE	APRVD

-4	2	TOP & BTM (LEVEL A ONLY)	29 1/2 X 9 1/2 X 5/16	NN-P-530	GROUP B
-3	A/R	CUSHIONING	AS REQUIRED	PPP-C-1797	TYPE 1
-2	A/R	TAPE	AS REQUIRED X 1/2	PPP-T-97	TYPE 1
-1	1	WRAP	30 X 26	MIL-B-121	TYPE 1, GRADE A, CLASS 2
F/N	QTY REQD	NOMENCLATURE OR DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION	

<h1 style="margin: 0;">SPECIAL PACKAGING INSTRUCTION</h1>			CODE ID 98747	SPI NO. (TPD) F 01-252-3344 SHEET 1 OF 2																																																													
PART OR DRAWING NO. 2007101-103	NATIONAL STOCK NO. 1620-01-252-3344	CURRENT REV B	ILL. P. ELLISON CHK. S. EDWARDS ENGR. K.W. OLSON AUTH. A. BRIMHALL																																																														
ITEM NOMENCLATURE PISTON ASSY, INNER		ORIGINAL DATE 89060																																																															
MILITARY PRESERVATION IAW: MIL-STD-2073 PACKING AS SPECIFIED BELOW AND BILL OF MATERIALS SERVICEABLE METHOD : 20 UNSERVICEABLE METHOD : 20 QUP 001 ICQ 000 CLEANING & DRYING IAW: MIL-STD-2073 PRESERVATIVE MIL-C-11796 OR MIL-C-16173 GRADE 2 CODE 02 MARKING IAW MIL-STD-129 SPECIAL MARKINGS: A) SPI NO. F01-252-3344 ** MARK THE SPI NUMBER ON ONE SIDE OF THE CONTAINER MARK REUSABLE CONTAINER DO NOT DESTROY																																																																	
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SPI NO. F 01-252-3344

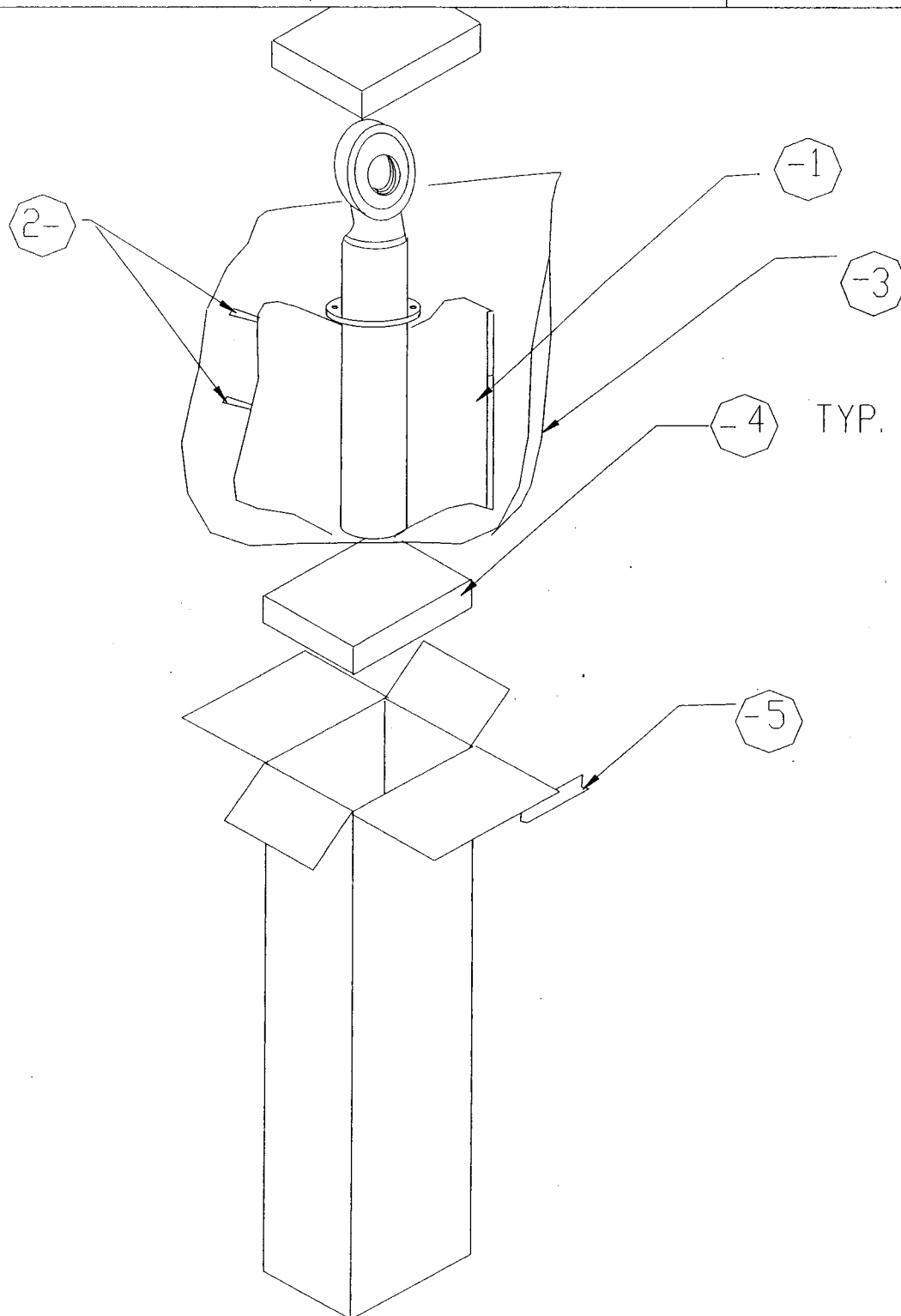
SPECIAL PACKAGING INSTRUCTION

CODE ID
98747

SPI NO. (TPD)
F 01-252-3344

ITEM NOMENCLATURE
PISTON ASSY, INNER

SHEET 2 OF 2



SPECIAL PACKAGING INSTRUCTION			CODE ID 98747	SPI NO. (TPO) 01-200-7131																																																																																				
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-5	2	TOP & BOTTOM PADS	19 1/2 X 12 X 1	A-A-59135 CLASS I, GRADE A																																															
-4	2	END PADS	12 X 6 1/2 X 2	A-A-59135 CLASS I, GRADE A																																															
-3	A/R	WRAP	A/R	MIL-PRF-121 TY I, GR. A, H.D.																																															
-2	1	STRING	A/R	ANY SUTIABLE VARIETY																																															
-1	1	POLY BAG	4 X 4 X A/R	L-P-378 TYPE I, CL I, GR. A, FIN. I																																															
P/N	QTY REQD	NOMENCLATURE DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION REVISIONS																																															

SPECIAL PACKAGING INSTRUCTION

CODE ID

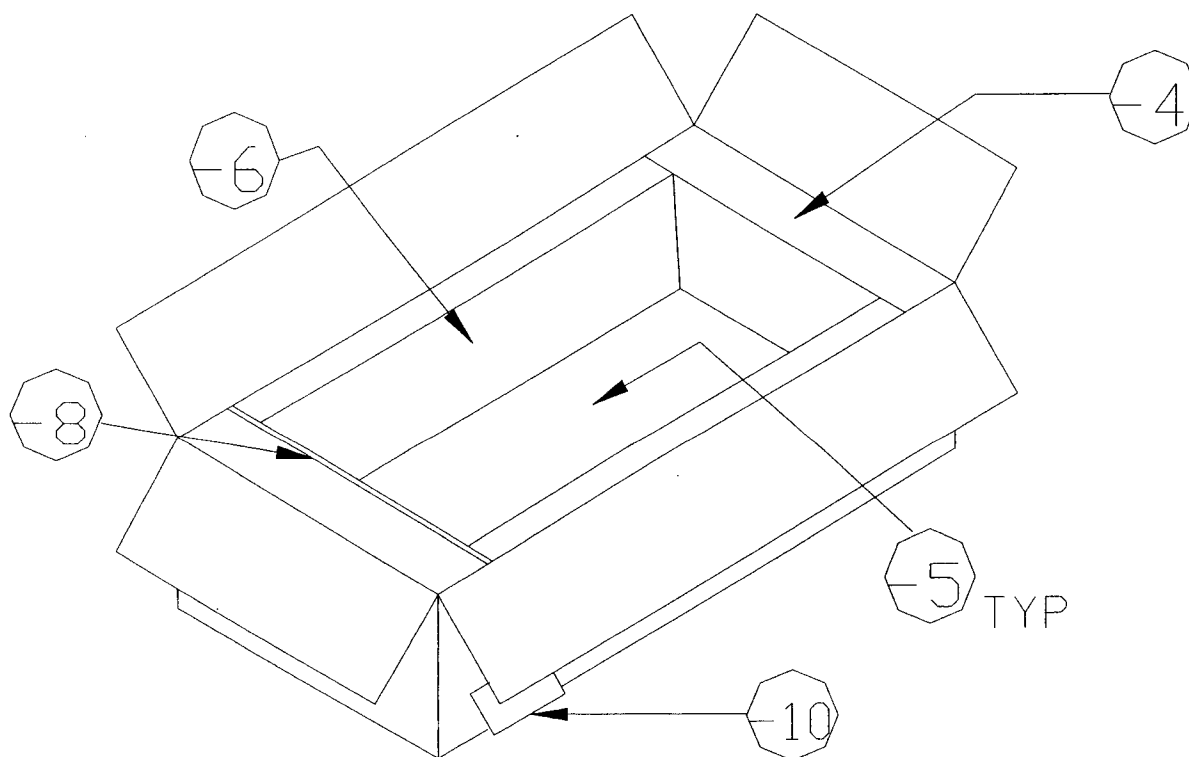
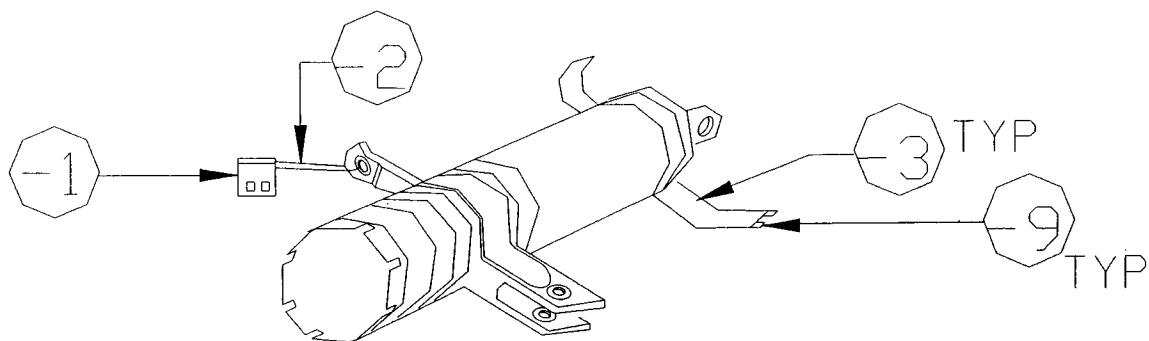
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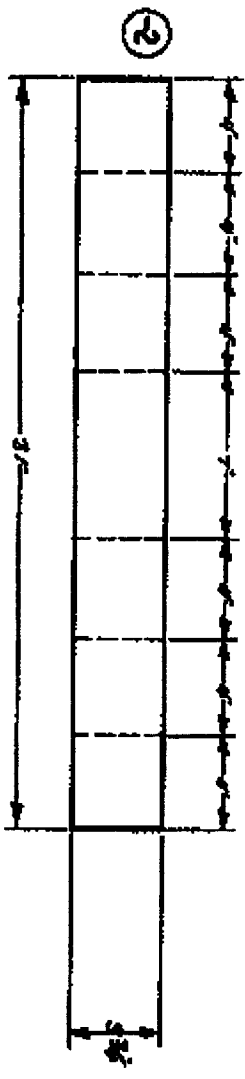
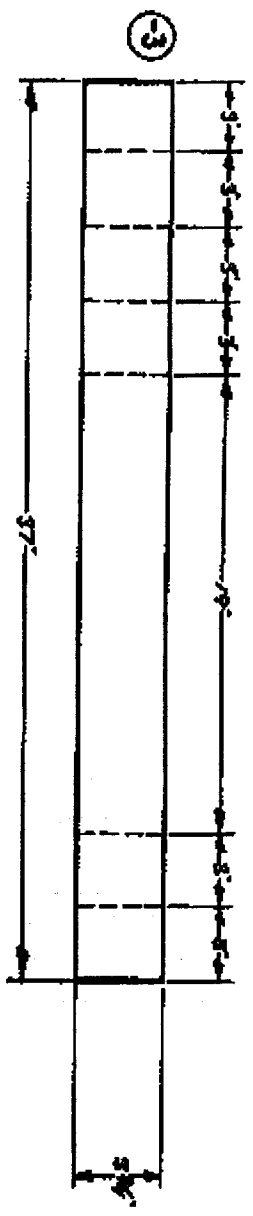
SPI NO. (TPD)

F01-071-0534

ITEM NOMENCLATURE
PISTON, LANDING GEAR

SHEET 2 OF 2





QUANTITY REQUIRED PER PART OR		ONE	APPROXIMATE	ONE UNIT	IDENTIFICATION NO.	MATERIAL / DESCRIPTION	DATE OF LAST PM
PARTS LIST		CYLINDER F - 5					
U.S. AIR FORCE		00-011-0192					
C		1/21/60					

SPECIAL PACKAGING INSTRUCTION

IDE ID

98747

SPI NO. (TPD)

00-007-1781

SHEET 1 OF 2

PART OR DRAWING NO.

14-40605-9

NATIONAL STOCK NO.

1620-00-007-1781

CURRENT REV

ORIGINAL DATE
88202

ILL. D. HEISE

CHK. F. LANDERS

ENGR. S. MEIER

AUTH. B. EVANS

ITEM NOMENCLATURE
PISTON, LANDING GEAR

PRESERVATION IAW MIL-P-116

LEVEL A METHOD 1

LEVEL B METHOD 1

LEVEL C METHOD 1 (REPARABLES)

QUP 001

ICQ 000

CLEANING C-1

DRYING D-1

PRESERVATIVE MIL-C-16173, GRADE 2

MARKING IAW MIL-STD-129

SPECIAL MARKINGS:

A) SPI NO. 00-007-1781

MARK THE SPI NUMBER ON ONE SIDE OF THE CONTAINER AND ON ALL REMOVABLE DUNNAGE

CLOSURE IAW PPP-B-621

NOTES:

1. USE MIL-C-16173, GRADE 2, ON CRITICAL SURFACES AND WRAP WITH REF-5, TAPE TO SECURE USING A-A-883 TAPE OR EQUAL.
2. USE THE PLYWOOD TOP & BOTTOM (P/N -6) FOR LEVEL B AND C SHIPMENTS ONLY.

PACKING AS SPECIFIED BELOW AND BILL OF MATERIALS

LEVEL SPEC STYLE TYPE CL VRTY GR

A PPP-B-621 4 2 A

B PPP-B-621 (MOD) 4 1 B

C PPP-B-621 (MOD) 4 1 B

LEVEL A LEVEL B LEVEL C

GROSS CU FT 2.370 2.116 2.116

GROSS WT LBS 64 57 57

DESIGN FRAGILITY G 100 100 100

LENGTH WIDTH DEPTH

CNTNR I.D. 42 11 1/2 5 1/2

CNTNR O.D.

LEVEL A 45 13 7

LEVEL B & C 45 13 6 1/4

ITEM DIM 40 10 5

ITEM WT LBS 36

REVISIONS

LTR	DESCRIPTION	DATE	APRVD

UNLESS OTHERWISE SPECIFIED, DIMENSIONS WILL BE IN INCHES. TOLERANCES: FRACTIONS: + OR - 1/16

-6	2	T & B (LEV B & C ONLY)	43 1/2 X 13 X 3/8	NN-P-530	GROUP B
-5	A/R	WRAP	AS REQD	MIL-B-121	TYPE II, GRADE A, CLASS 2
-4	2	CUSHIONS	A/R X 3 X 1/2	PPP-P-115	TYPE I
-3	8	CLEATS	5 1/2 X 2 1/2 X 3/4	NN-P-530	GROUP B
-2	2	SADDLES	2 3/4 X 1 1/2 (ACT) X 11 1/2	MIL-STD-731	CLASS 2
-1	2	SADDLES	2 3/4 X 1 1/2 (ACT) X 11 1/2	MIL-STD-731	CLASS 2
P/N	QTY REQD	NOMENCLATURE OR DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION	

SPI NO. 00-007-1781

SPECIAL PACKAGING INSTRUCTION

CODE ID

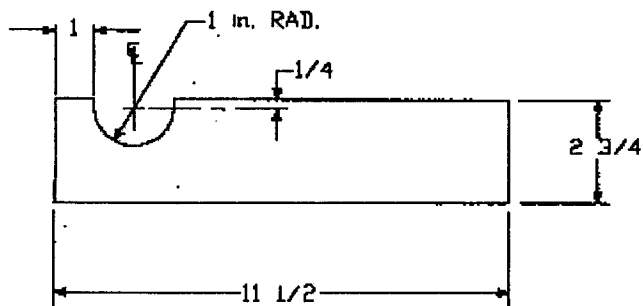
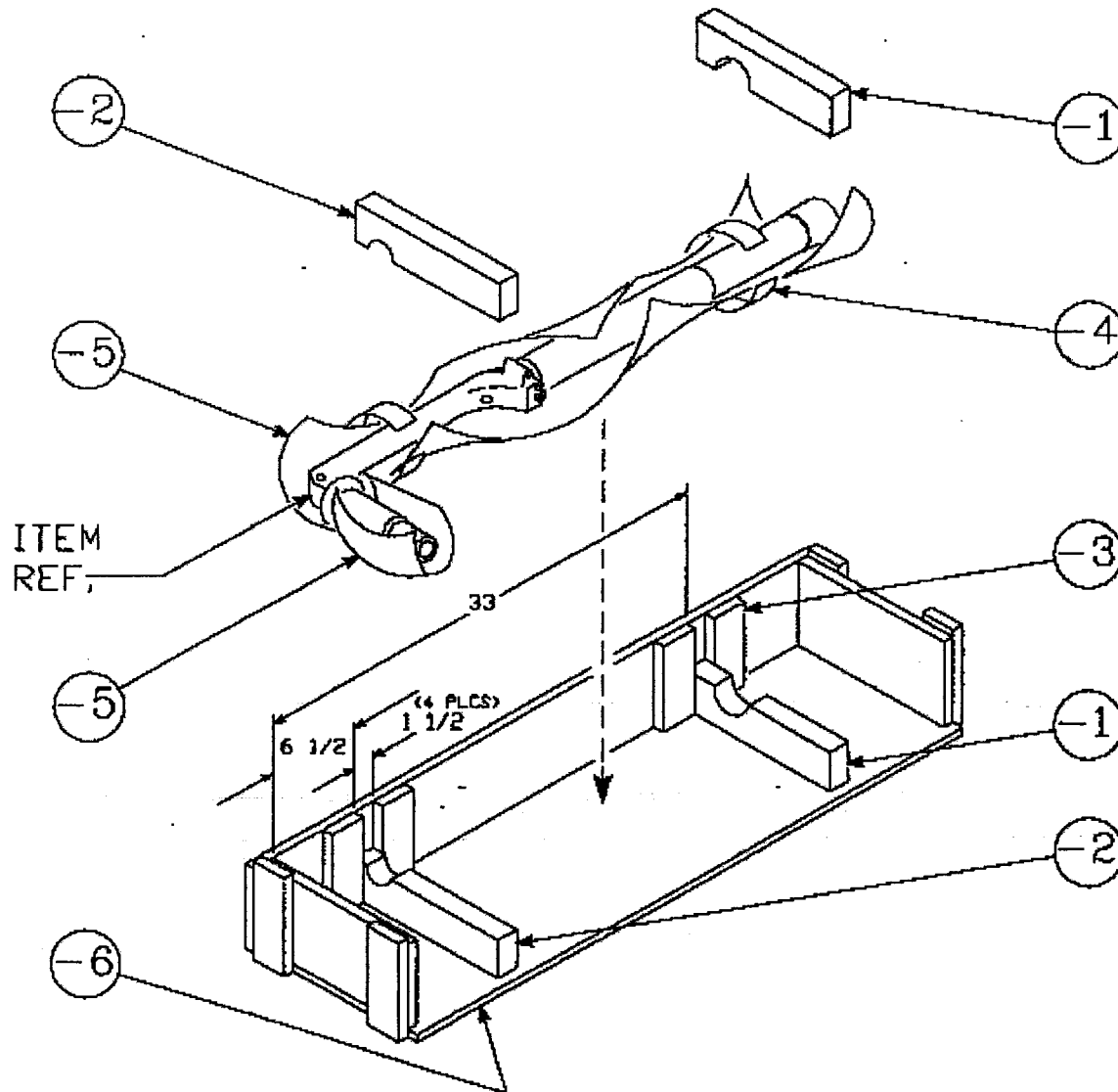
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SPI NO. (CPU)

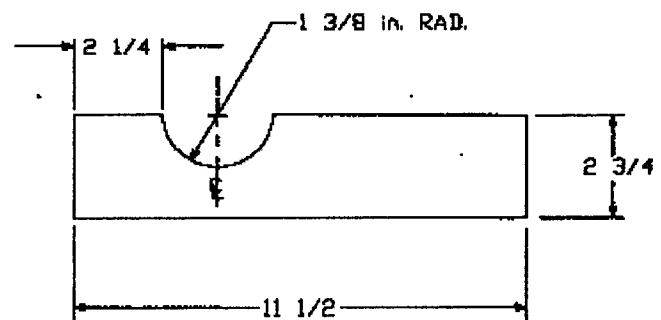
00-007-1781

ITEM NOMENCLATURE
PISTON, LANDING GEAR

SHEET 2 OF 2



-2 DETAIL



-1 DETAIL

SPECIAL PACKAGING INSTRUCTION				CODE ID 98747	SPI NO. (TPO) F01-252-4042
PART OR DRAWING NO. 2007602-103			NATIONAL STOCK NO. 1620-01-252-4042	SHEET 1 OF 2	
ITEM NOMENCLATURE PISTON ASSEMBLY			CURRENT REV B	ILL. T. LUCERO CHK. T. ZIMMERMAN ENGR. K.W. OLSON AUTH. A. BRIMHALL	
ORIGINAL DATE 89167					
MILITARY PRESERVATION IAW MIL-STD-2073			PACKING AS SPECIFIED BELOW AND BILL OF MATERIALS		
SERVICEABLE METHOD 20			LEVEL SPEC STYLE TYPE CL VRTY GR		
UNSERVICEABLE METHOD 20			A PPP-B-621 (MOD) 4 2 A		
QUP 001			B PPP-B-621 (MOD) 4 1 B		
ICQ 000			LEVEL A LEVEL B		
CLEANING & DRYING IAW MIL-STD-2073			GROSS CU FT 2.474 2.474		
PRESERVATIVE MIL-PRF-16173, GR 2, CODE 02			GROSS WT LBS 54 54		
			DESIGN FRAGILITY G 100 100		
MARKING IAW MIL-STD-129			LENGTH WIDTH DEPTH		
SPECIAL MARKINGS:			CNTR I.D. 35 11 8		
A) SPI NO. F01-252-4042			CNTR O.D. 38 12 1/2 9		
MARK THE SPI NUMBER ON ONE SIDE OF THE CONTAINER AND ON ALL REMOVABLE DUNNAGE.			ITEM DIM 32 9 5 1/2		
MARK REUSABLE CONTAINER DO NOT DESTROY			ITEM WT LBS 31		
CLOSURE IAW PPP-B-621			REVISIONS		
CAUTION NOTICE			LTR DESCRIPTION DATE		
1. THIS PISTON HAS A HISTORY OF CORROSION.			A ADD NOTES & UPDATE 99129		
INSURE THE PRESERVATIVE IS APPLIED AS INSTRUCTED IN NOTE 1.			B UPDATE/ADD WOOD STATEMENT 01320		
NOTES:			2. SOURCE OF SUPPLY FOR TORQUE WASHERS, CATALOG NO. MS-98398K2915; TRW FASTENER DIV. 31 AMES ST. CAMBRIDGE, MASS. 02142, OR LOCAL PURCHASE		
1. APPLY MIL-PRF-16173, GRADE 2 PRESERVATIVE ON ALL BARE METAL SURFACES, INCLUDING INSIDE HOLLOW TUBE OF THE PISTON ASSEMBLY. INSURE ALL SURFACES ARE COMPLETELY COVERED. WRAP PRESERVED EXPOSED SURFACES WITH -5 AND SECURE IN PLACE WITH A-A-883 TAPE OR EQUAL.			3. PISTONS PACKED IN PREVIOUS ADDITIONS OF THIS SPI DO NOT REQUIRE REPACKING IF THE INTEGRITY OF THE SPI IS NOT COMPROMISED.		
NOTICE 1: TRAFFIC MANAGEMENT OFFICES OR ANY ACTIVITY BUYING SOLID WOOD MATERIAL TO USE FOR BUILDING OR ASSEMBLING PACKAGING MUST COMPLY WITH THE FOLLOWING REQUIREMENT FOR PURCHASING THE WOOD: "ALL WOODEN PALLETS AND WOOD CONTAINERS PRODUCED OF NON-MANUFACTURED WOOD SHALL BE CONSTRUCTED FROM HEAT TREATED (HT TO 56 DEGREES CENTIGRADE FOR 30 MINUTES) MATERIAL AND CERTIFIED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC) IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT WWW.APHIS.USDA.GOV.					
-12	A/R	TAPE	1 X A/R	A-A-883	TYPE I OR II
-11	6	NUTS	3/8	FF-N-836	TYPE II, STYLE 4
-10	6	WASHERS	3/8	FF-W-92	TYPE A, GRADE I, CLASS A
-9	6	TORQUE WASHERS	to fit 3/8 BOLT	5310-00-936-9532	(SEE NOTE 2)
-8	6	BOLTS	3/8 X 5	FF-B-584	TYPE I, CLASS 1, STYLE A
-7	3	STRAPPING	A/R X 1 1/4 X .035	ASTM-D3953	TYPE I, REG DUTY, FIN B
-6	3	CUSHIONING	A/R X 3 X 1/4	PPP-PRF-115	TYPE I (CARGO PACK)
-5	1	WRAP	20 X 12	MIL-PRF-121	TYPE I, GRADE A, CLASS 1
-4	1	WRAP	8 X 8	MIL-PRF-121	TYPE I, GRADE A, CLASS 1
-3	2	SADDLES	2 X 4 (NOM) X 8	ASTM-D6199	CLASS 2
-2	1	SADDLE	2 X 4 (NOM) X 7	ASTM-D6199	CLASS 2
-1	2	TOP & BOTTOM	36 1/2 X 12 1/2 X 1/2	A-A-55057	TYPE A
P/N	QTY REQD	NOMENCLATURE OR DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION	

SPI NO. F01-252-4042

SPECIAL PACKAGING INSTRUCTION

CODE ID
98747

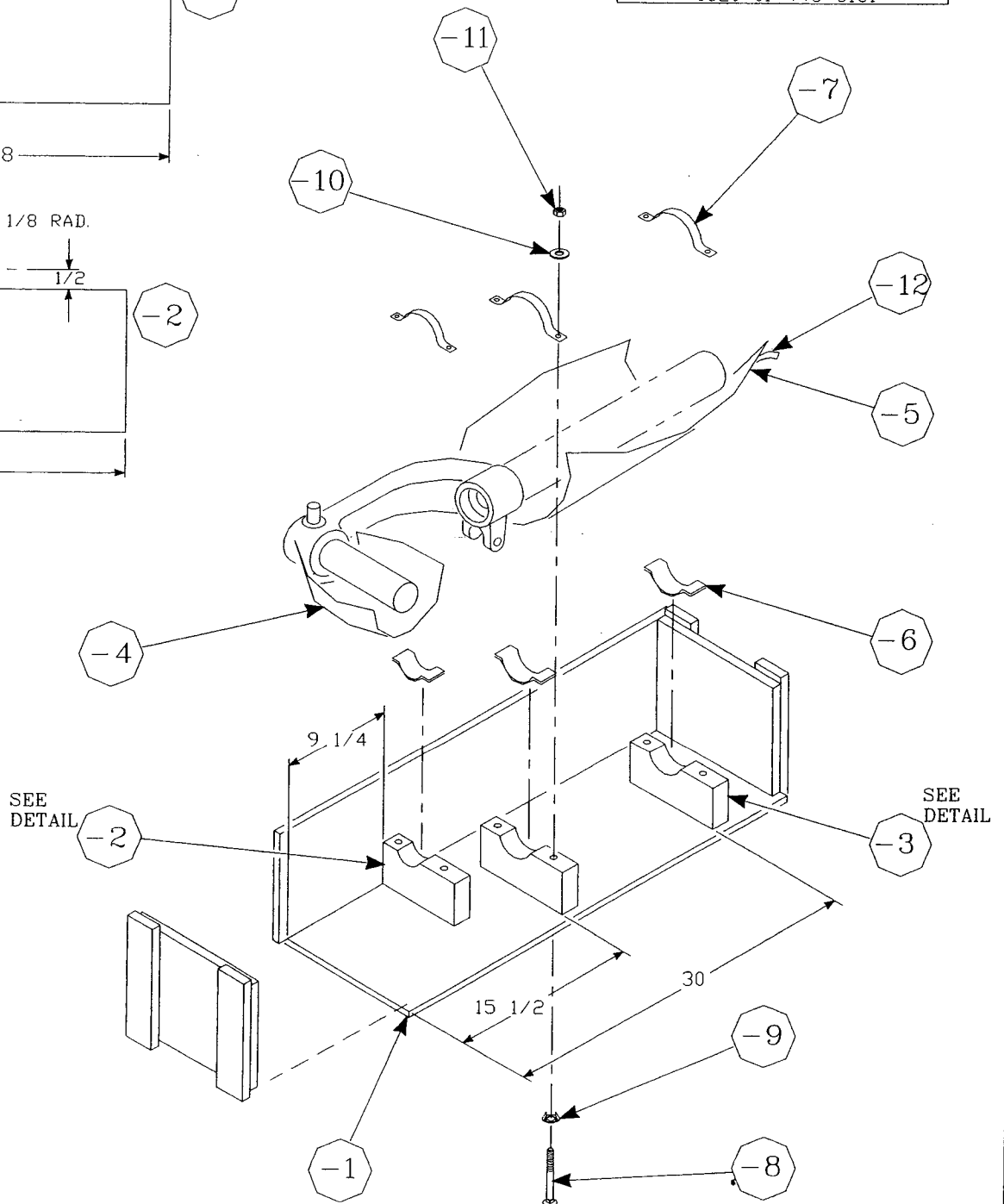
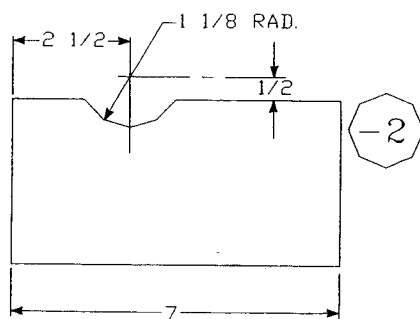
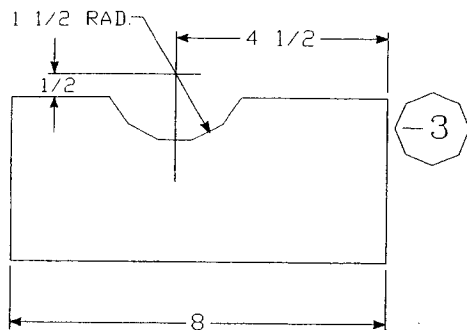
SPI NO. (TPD)
F01-252-4042

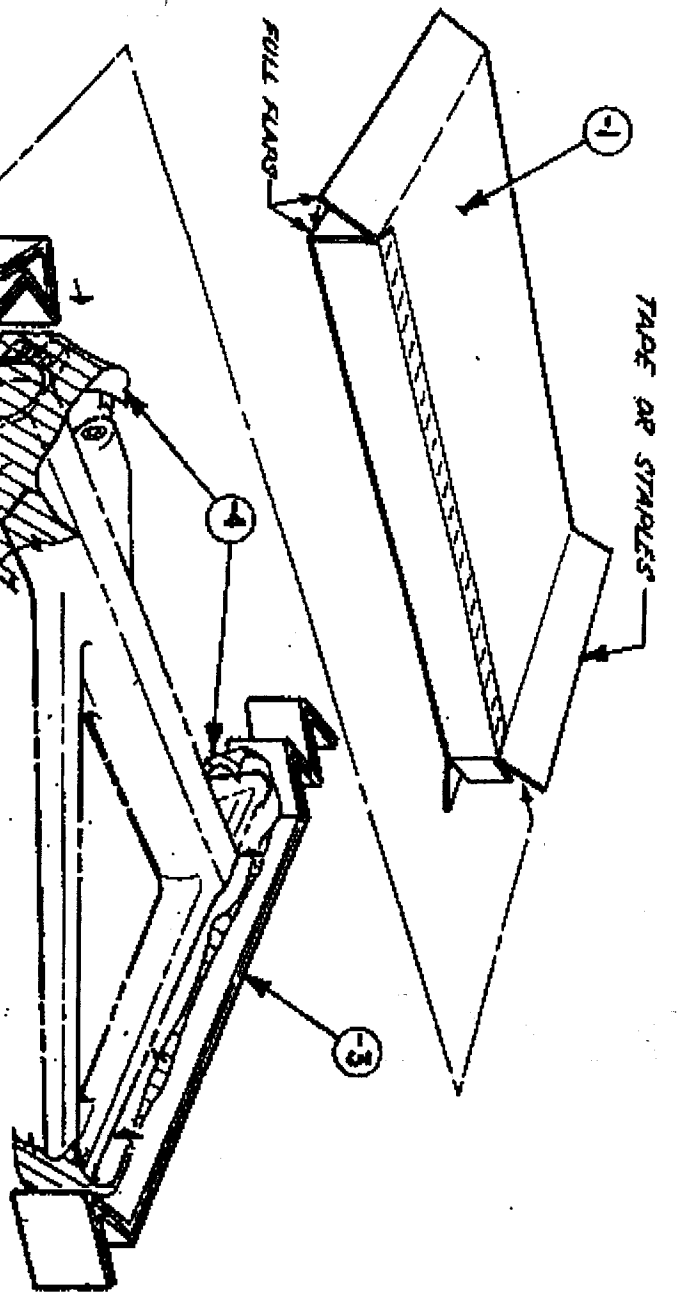
ITEM NOMENCLATURE
PISTON ASSEMBLY

SHEET 2 OF 2

NSN'S THAT APPLY

1620-01-252-4042
1620-01-061-3239
1620-01-071-0538
1620-01-445-6131





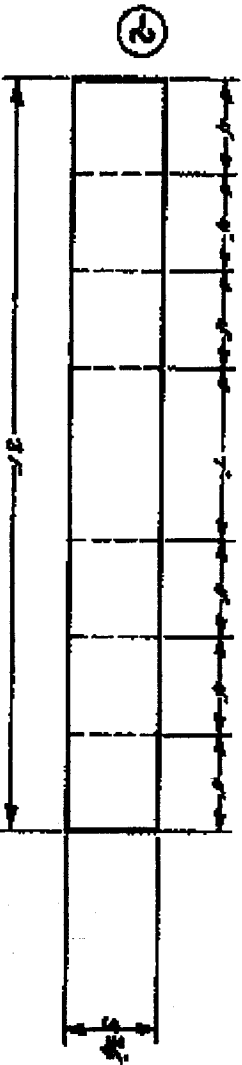
NOTE:
 MOL-C-1A115 GRADE 2 SHALL BE APPLIED TO AXLES, CYLINDERS AND SUSPENSION
 AND MOL-D-2141 TO BEADINGS. TREATED PARTS SHALL BE
 COVERED WITH MOL-D-2141 BARRIER AND SEALED WITH PP-1-40 TAPE.
 ALTERNATE: RIMP CRITICAL AREAS AND BEADINGS WITH MOL-P-3-400 NO. 40 WPT.
 TYPE 1, CLASS 2, STYLE A, OR EQUIV.

PAINTATION & PACKAGING
 LEVEL A IN A/W MIL-D-114 METHOD I
 LEVEL B IN A/W MIL-D-114 METHOD I
 LEVEL E
 CLEANING & DRYING IN A/W MIL-D-114
 PRESERVATION COMPOUND SEE NOTE:
 AMOUNT OF PRESERVANT (LBS) N/A
 CLOSURE OF STRAPPING IN A/W PP-1-4028
 MARKING IN A/W MIL-D-114
 SPECIAL MARKING (SEE INSTRUCTIONS
 INSTRUCTIONS)

MARK: TWO DO-ALL-ONE, ON ONE SIDE OF CONTAINER
 MARK: "WEARABLE CONTAINER-DO NOT DESTROY"
 IN ONE END

QUANTITY REQUIRED PER ORDER NO.		DIRECTOR'S SIGNATURE		DATE	
		[Signature]		16 OCTOBER 1971	
APPLICATION		MILITARY		C	
		CYLINDER F-5		770	
		OPEN AND MIL AIR UTM		00-011-0192	
		1630		1630	

LEVEL	SPECIFICATION	SIZE	TYPE	CLAS	QUANTITY	GRADE	WT	CU
1	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
2	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
3	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
4	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
5	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
6	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
7	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
8	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
9	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
10	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
11	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
12	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
13	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
14	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
15	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
16	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
17	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
18	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
19	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
20	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
21	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
22	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
23	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
24	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
25	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
26	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
27	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
28	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
29	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
30	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
31	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
32	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
33	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
34	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
35	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
36	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
37	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
38	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
39	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
40	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
41	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
42	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
43	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
44	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
45	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
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48	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
49	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
50	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
51	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
52	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
53	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
54	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
55	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
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58	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
59	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
60	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
61	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
62	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
63	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
64	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
65	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
66	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
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76	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
77	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
78	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
79	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
80	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
81	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
82	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
83	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
84	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
85	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
86	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
87	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
88	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
89	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
90	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
91	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
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93	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
94	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
95	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
96	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
97	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
98	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
99	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5
100	PP-1-4028	27 1/4 X 19 3/4 X 1/8	FD	15	30	156	30	1.5



1626 MAY 4 1972

SPECIAL PACKAGING INSTRUCTION

9E 7

00-417-6249

SHEET 1 OF 4

PART OR DRAWING NO. 7926445	NATIONAL STOCK NO. 1620-00-417-6249	CURRENT REV A	ILL. E. NYE <i>E. Nye</i>
ITEM NOMENCLATURE PISTON, LANDING GEAR, C-5		ORIGINAL DATE 8/24/6	CHK. P. FRANCIS <i>P. Francis</i> ENGR. V. ELIZONDO <i>V. Elizondo</i> AUTH. B. EVANS <i>B. Evans</i>

PRESERVATION IAW MIL-P-116

LEVEL A METHOD I

LEVEL B METHOD I

LEVEL C METHOD I

DUP 001

ICQ 000

CLEANING METHOD C-1

DRYING METHOD D-1

PRESERVATIVE MIL-C-16173, GRADE I

MARKING IAW MIL-STD-129

SPECIAL MARKINGS:

A) SPI NO. 00-417-6249 MARK THE SPI
NUMBER ON ONE SIDE OF THE CONTAINER AND

ON ALL REMOVABLE DUNNAGE.

B) CAUTION LIFT BY BASE ONLY

C) TO OPEN REMOVE LAG BOLTS

D) CENTER OF BALANCE (SEE NOTE 6)

-NOTICE-

ITEMS ALREADY PACKED ACCORDING TO PREVIOUS
EDITIONS OF THIS SPI (TPO) DO NOT REQUIRE
REPACKING.

PACKING AS SPECIFIED BELOW AND BILL OF MATERIALS

LEVEL SPEC STYLE TYPE CL VRTY GR

A MIL-B-26195(MOD) A II I

B MIL-B-26195(MOD) A I I

C MIL-B-26195(MOD) A I I

LEVEL A LEVEL B LEVEL C

GROSS CU FT 27.287 27.287 27.287

GROSS WT LBS 560 560 560

DESIGN FRAGILITY G 110 110 110

LENGTH WIDTH DEPTH

CNTR I.D. 76 24 18

CNTR O.D. 78 26 23 1/4

ITEM DIM 71 17 14

ITEM WT LBS 423

REVISIONS

LTR	DESCRIPTION	DATE	APRVD
A	COMPLETELY REVISED, UPDATED, AND REDRAWN	88347	<i>Wye</i>

CLOSURE IN ACCORDANCE WITH MIL-B-26195

22	22	CORNER STRAPS (SEE NOTE 4)	12 X 3/4 X .028	QQ-S-781 CLASS 1, TYPE II, REG DUTY, FIN A
21	3	JOISTS	1 X 4(NOM) X 24	MIL-STD-731 CLASS 2
20	12	LATERAL JOIST SUPPORTS	1 X 4(NOM) X 3 1/2	MIL-STD-731 CLASS 2
19	6	VERTICAL JOIST SUPPORTS	1 X 3(NOM) X 13	MIL-STD-731 CLASS 2
18	A/R	TAPE	AS REQUIRED X 2	PPP-T-76
17	1	WRAP	AS REQUIRED	MIL-B-121 TYPE I, GR A, CL 2
16	2	CHAFFING STRIPS	AS REQUIRED X 3 X 1/2	PPP-P-115 TYPE I OR EQUAL
15	2	STRAPPING	0.035 X 1 1/4 X A/R	QQ-S-781 CL I, TYPE I, HVY DUTY, FIN A
14	12	NUTS	3/8	FF-N-836 TYPE II, STYLE 4
13	20	WASHERS	1/4	FF-W-92 TYPE A, GR I, CLASS A
12	12	WASHERS	3/8	FF-W-92 TYPE A, GR I, CLASS A
11	4	TORQUE WASHERS	TO FIT 3/8 BOLT	SEE NOTE 1 5310-00-936-9532
10	20	LAG BOLTS	2 1/2 X 1/4	FF-B-561 TYPE I, STYLE I, GR B
9	6	BOLTS	13 X 3/8	FF-B-584 TYPE I, CLASS I, STYLE A
8	6	BOLTS	7 X 3/8	FF-B-584 TYPE I, CLASS I, STYLE A
7	2	SADDLE SUPPORTS	7 1/2 X 24 X 5/16	NN-P-530 GROUP B (SEE DETAIL)
6	2	SADDLE SUPPORTS	7 1/2 X 24 X 5/16	NN-P-530 GROUP B (SEE DETAIL)
5	1	BASE	76 X 24 X 3/4	NN-P-530 GROUP B
4	1	SADDLE	2 X 8(NOM) X 24	MIL-STD-731 CLASS 2 (SEE DETAIL)
3	1	SADDLE	2 X 8(NOM) X 24	MIL-STD-731 CLASS 2 (SEE DETAIL)
2	2	HEADERS	2 X 4(NOM) X 76	MIL-STD-731 CLASS 2
1	5	SKIDS	4 X 4(NOM) X 26	MIL-STD-731 CLASS 2

SPI NO. 00-417-6249

QTY REQD	NOMENCLATURE OR DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION
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FORM 2169 MOD

COMPUTER GENERATED

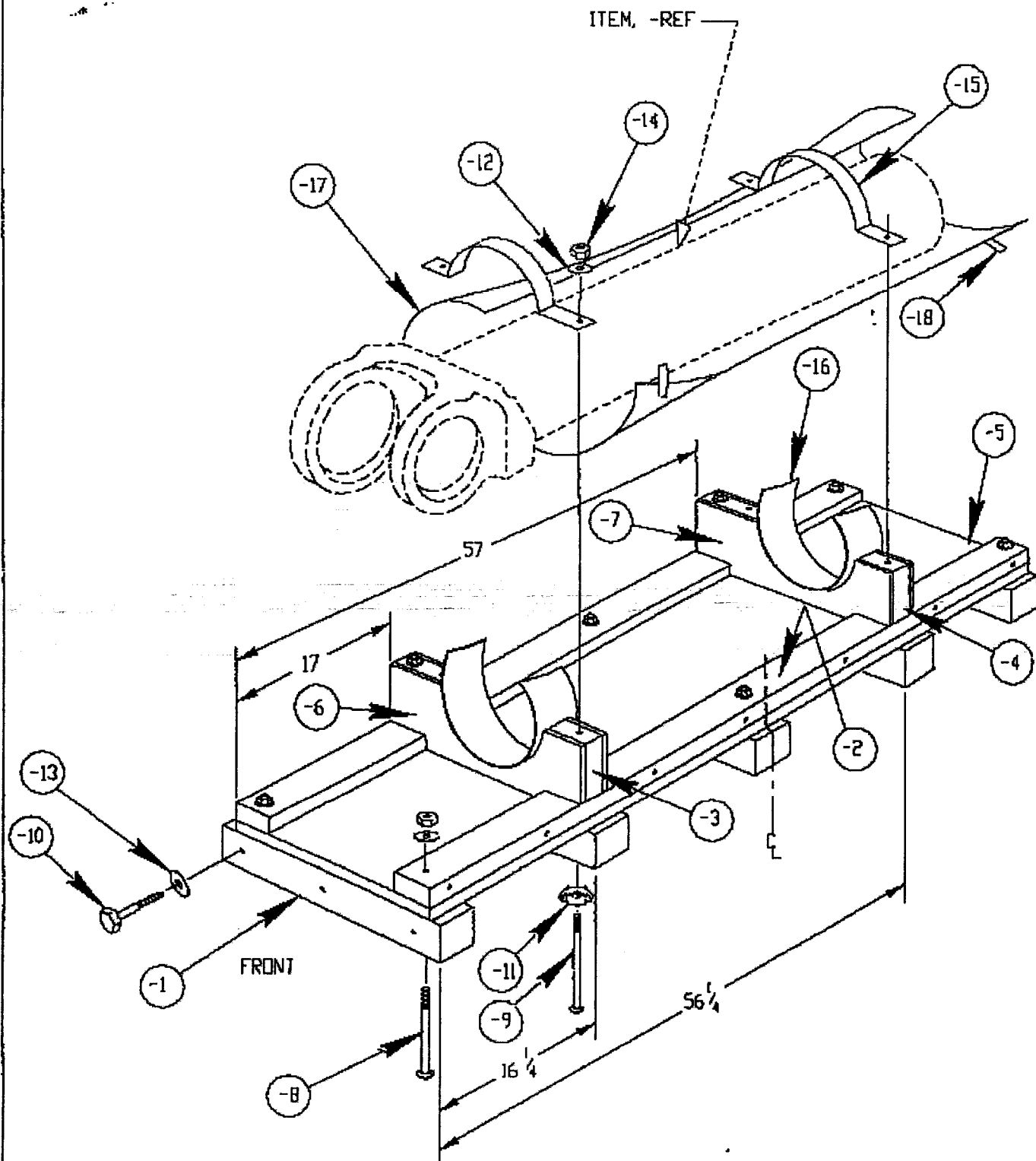
SPECIAL PACKAGING INSTRUCTION

CD NO
98747

SPI NO. (TPO)
00-417-6249

ITEM NOMENCLATURE
PISTON, LANDING GEAR C-5

SHEET 2 OF 4



SPECIAL PACKAGING INSTRUCTION

CE 1D

98747

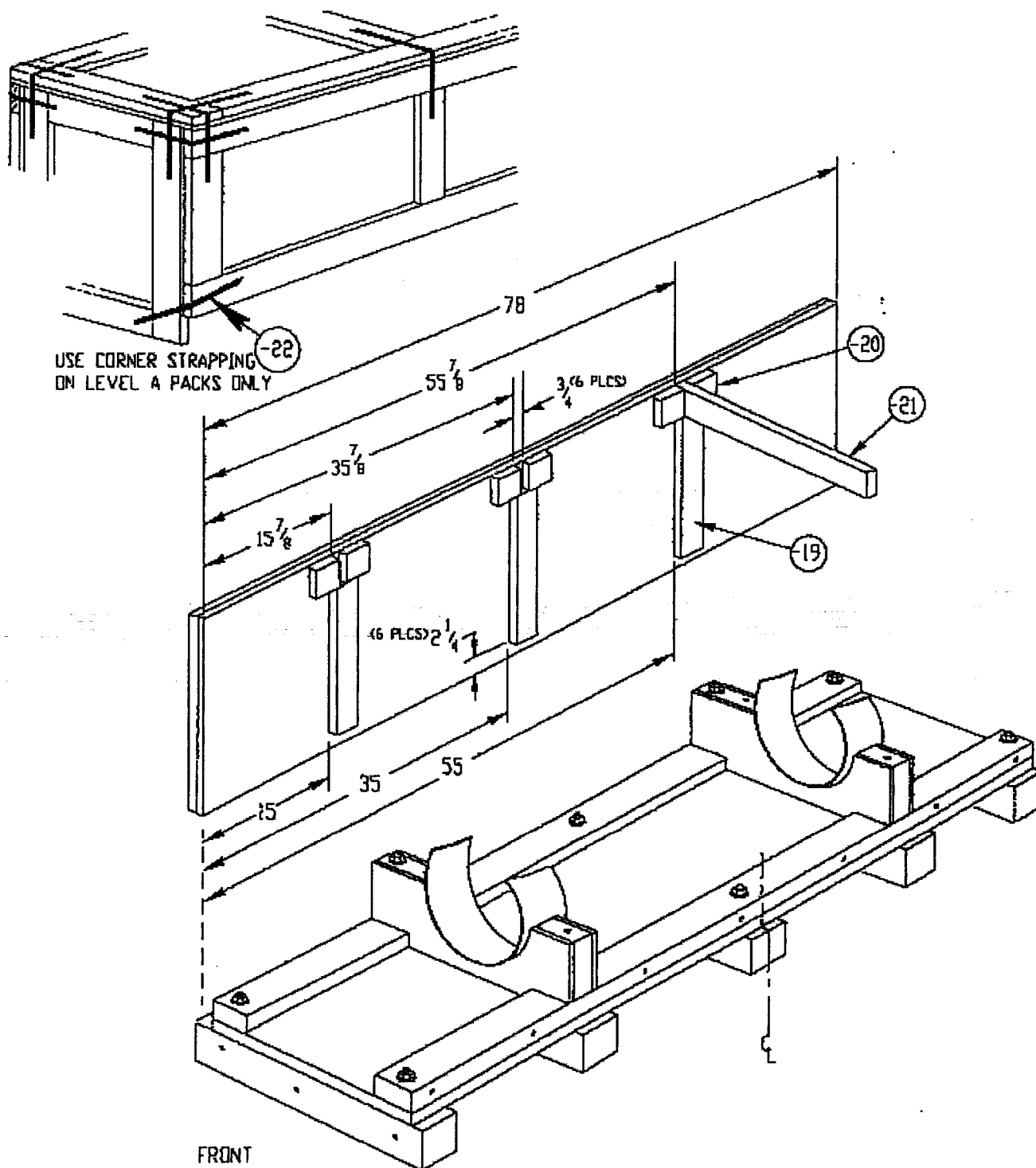
SPI NO. (TPD)

00-417-6249

ITEM NOMENCLATURE

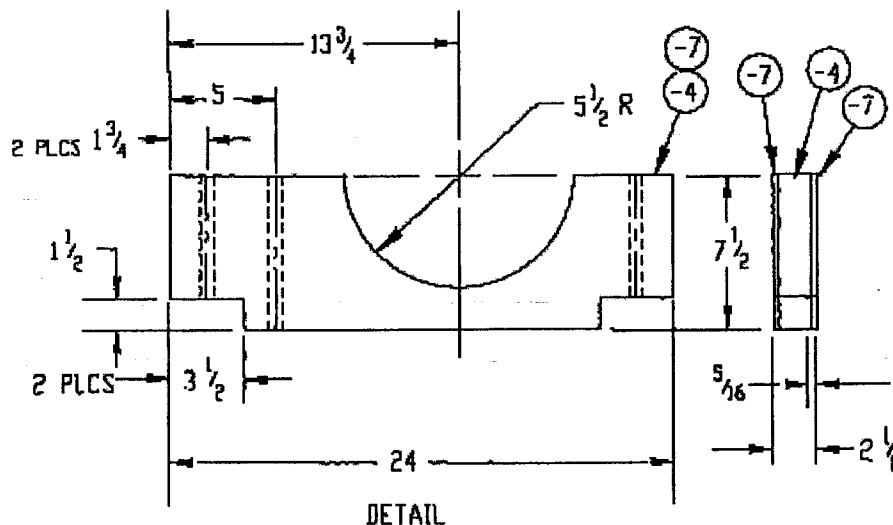
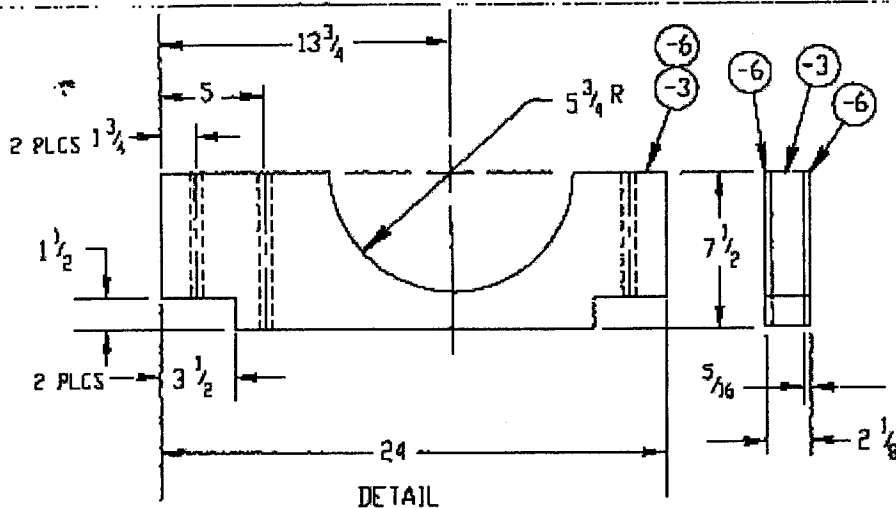
PISTON, LANDING GEAR C-5

SHEET 3 OF 4



00-417-6249

SHEET 4 OF 4



NOTES:

1. SOURCE OF SUPPLY FOR TORQUE WASHERS,
CATALOG NO. MS-9839BK2915:

TRW FASTENER DIV.
31 AMES STREET
CAMBRIDGE MASS. 02142

2. PRESERVE CRITICAL AREAS WITH MIL-C-16173, GRADE 1 OR EQUAL. WRAP IN -17 USING -18 TO SECURE WRAP.

3. CHAFFING STRIP, -16, SHALL BE USED AT ALL POINTS WHERE ITEM WOULD OTHERWISE CONTACT WOOD BLOCKING OR METAL STRAPPING.

4. SADDLE SUPPORTS, -6 AND -7, SHALL BE SECURED TO SADDLES -3 AND -4; AND CORNER STRAPS, -22, TO CONTAINER USING 3d NAILS CONFORMING TO FF-N-105, TYPE II OR EQUAL.

5. EXTERIOR CLEATS WILL HAVE THE SAME SPACING AS VERTICAL JOIST SUPPORTS. VERTICAL AND LATERAL JOIST SUPPORTS SHALL BE SECURED TO SIDE PANELS AND CLEATS USING 6d NAILS CONFORMING TO FF-N-105, TYPE II OR EQUAL.

6. CENTER OF BALANCE WILL BE MARKED ON OUTSIDE OF CONTAINER IAW MIL-STD-129 PARA 20.27.

SPECIAL PACKAGING INSTRUCTION

CODE ID
98747

SPI NO. (TPO)
00-195-4810

SHEET 1 OF 3

PART OR DRAWING NO.
7327022-30

NATIONAL STOCK NO.
1620-00-195-4810

CURRENT
REV

LL D. HEISE

ITEM NOMENCLATURE
CYLINDER, LANDING GEAR

ORIGINAL
DATE
85343

CHK C. KLEEB

ENGR S. MORAN

AUTH R. ELBRADER

PRESERVATION IAW MIL-P-116

LEVEL A METHOD I

LEVEL B METHOD I

LEVEL C METHOD I

QUP 1 EA.

ICQ N/A

CLEANING C-1

DRYING D-1

PRESERVATIVE MIL-P-3420 (SEE NOTE)

MARKING IAW MIL-STD-129

SPECIAL MARKINGS:

A) SPI NO. 00-195-4810

B) MARK THE SPI NUMBER ON ONE SIDE OF THE CONTAINER, AND ON ALL REMOVABLE DUNNAGE.

CLOSURE IN A/W: MIL-B-26195 AND THIS DRAWING.

- NOTICE -

CONSULT YOUR MICROFICHE SPI (TPO)
CROSS REFERENCE FILE TO DETERMINE
LATEST SPI (TPO) IN EFFECT
(SEE AFR 71-9, PARA 13-9).

PACKING AS SPECIFIED BELOW AND BILL OF MATERIALS

LEVEL	SPEC	STYLE	TYPE	CL	VRTY	GR
A	MIL-B-26195 (MOD)	A	II	1		
B	MIL-B-26195 (MOD)	A	I	1		
C	MIL-B-26195 (MOD)	A	I	1		

	LEVEL A	LEVEL B	LEVEL C
GROSS CU FT	19.3	19.3	19.3
GROSS WT LBS	212	212	212
DESIGN FRAGILITY G	100	100	100
LENGTH			
WIDTH			
DEPTH			
CNTNR I.D.	56	26	15 1/2
CNTNR O.D.			
LEVEL A	58	28	20 1/2
LEVEL B & C	58	28	20 1/2
ITEM DIM	52	23	12 3/4
ITEM WT LBS	118		

SOURCE OF SUPPLY FOR TORQUE WASHER:
CATALOG NUMBER MS-98398
CARR FASTENER CO.
31 AMES ST.
CAMBRIDGE, MASS. 02142

UNLESS OTHERWISE SPECIFIED, DIMENSIONS
WILL BE IN INCHES.
TOLERANCES: FRACTIONS; + OR - 1/8,
DECIMALS; + OR - .125.

-19	A/R	BARRIER, VPI	A/R	MIL-P-3420	TYPE I, CL 1, STYLE C
-18	A/R	TAPE	1/2 X A/R	PPP-T-97	TYPE IV
-17	3	CHAFFING STRIPS	3 X A/R	PPP-P-115	TYPE I, OR EQUAL
-16	4	TORQUE WASHERS	TO FIT 3/8 BOLTS	MS-98398	
-15	10	WASHERS	3/8	FF-W-92	TYPE A, GR 1, CL A
-14	16	WASHERS	1/4	FF-W-92	TYPE A, GR 1, CL A
-13	16	LAG BOLTS	2 1/2 X 1/4	FF-B-561	TYPE I, STYLE 1, GR 8
-12	2	BOLTS	3 1/2 X 3/8	FF-B-584	TYPE I, CL 1, STYLE A
-11	2	BOLTS	8 1/2 X 3/8	FF-B-584	TYPE I, CL 1, STYLE A
-10	6	BOLTS	6 X 3/8	FF-B-584	TYPE I, CL 1, STYLE A
-9	18	CORNER STRAPS	12 X 3/4 X .028	QO-S-781	CL 1, TYPE II, FIN A
-8	2	HOLD DOWN STRAPS	1 1/4 X .035 X A/R	QO-S-781	CL 1, TYPE I, HVY DUTY, FIN A
-7	1	BASE SUPPORT (SEE DET.)	22 7/8 X 7 1/4 X 1/2	NN-P-530	GROUP B
-6	2	SADDLE SUPPORTS	26 X 7 1/4 X 3/8	NN-P-530	GROUP B
-5	1	BASE	56 X 26 X 1/2	NN-P-530	GROUP B
-4	1	BASE SUPPORT (SEE DET.)	2 X 8 (NOM) X 22 7/8	MIL-STD-731	CLASS 2
-3	1	SADDLE (SEE DETAIL)	2 X 8 (NOM) X 26	MIL-STD-731	CLASS 2
-2	2	HEADERS	2 X 2 (NOM) X 52	MIL-STD-731	CLASS 2
-1	3	SKIDS	4 X 4 (NOM) X 28	MIL-STD-731	CLASS 2
PART NO.	QTY REQD	NOMENCLATURE OR DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION	

SPI NO. 00-195-4810

SPECIAL PACKAGING INSTRUCTION

CODE ID
98747

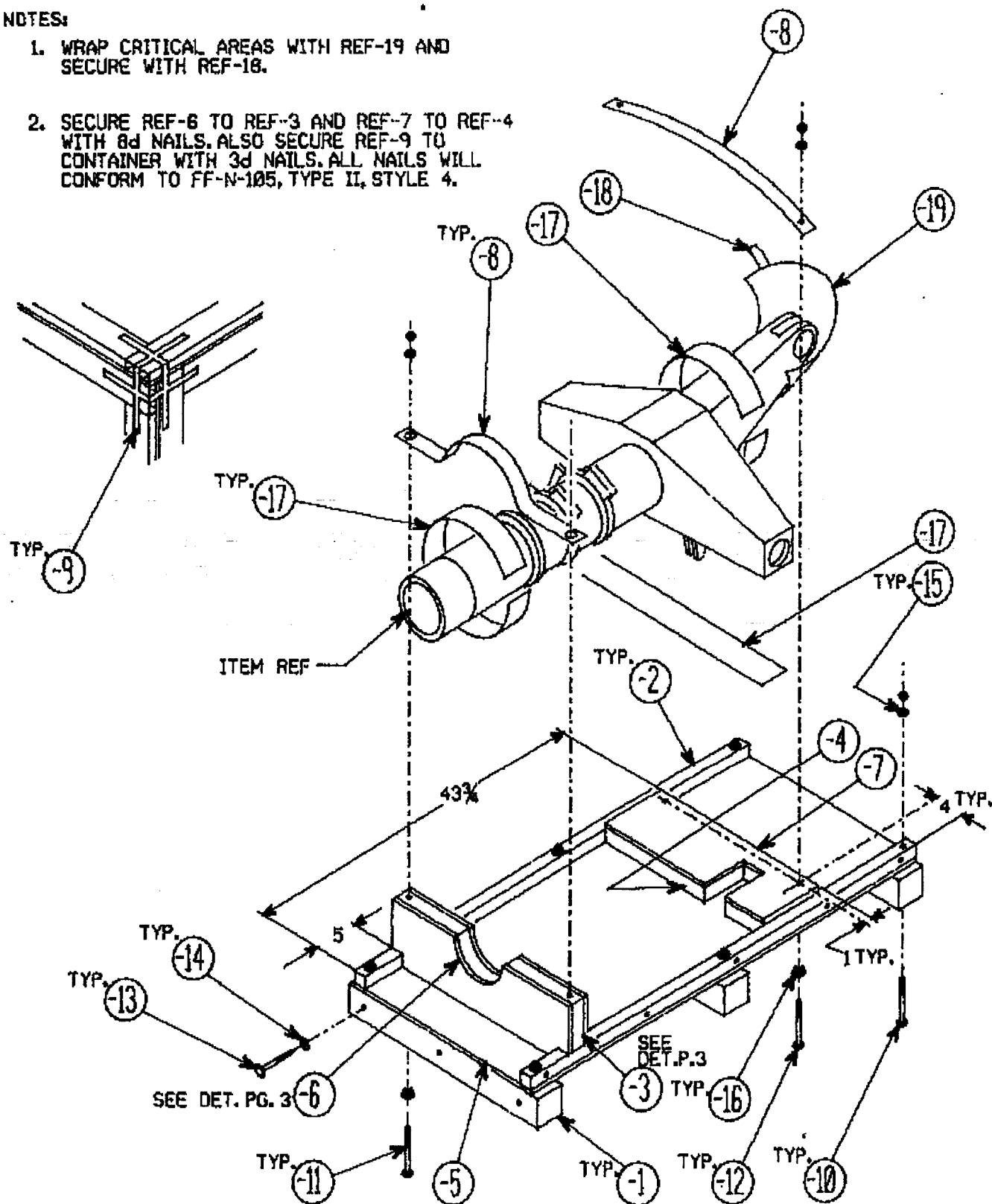
SPI NO. (TPO)
00-195-4810

ITEM NOMENCLATURE
CYLINDER, LANDING GEAR

SHEET 2 OF 3

NOTES:

1. WRAP CRITICAL AREAS WITH REF-19 AND SECURE WITH REF-18.
2. SECURE REF-6 TO REF-3 AND REF-7 TO REF-4 WITH 8d NAILS. ALSO SECURE REF-9 TO CONTAINER WITH 3d NAILS. ALL NAILS WILL CONFORM TO FF-N-105, TYPE II, STYLE 4.



SPI NO. 00-195-4810

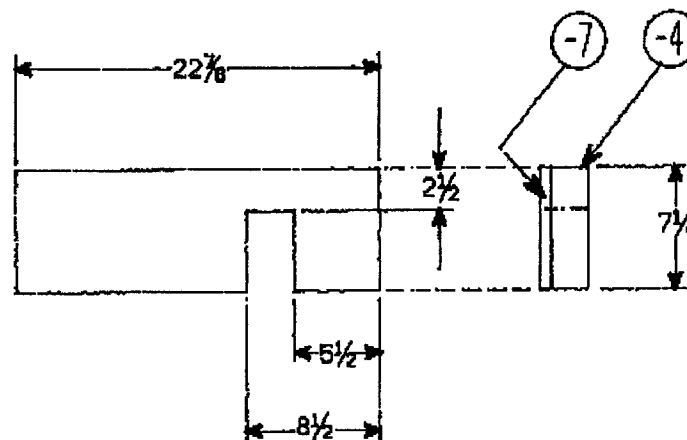
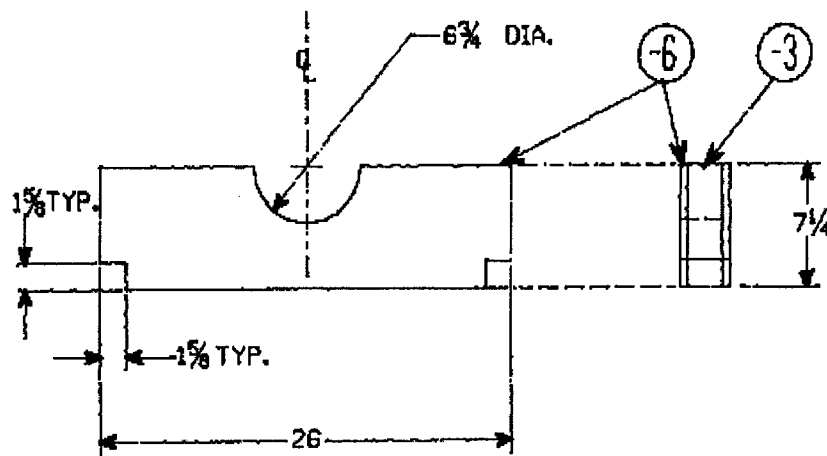
SPECIAL PACKAGING INSTRUCTION

CODE ID
98747

SPI NO. (TPO)
00-195-4810

ITEM NOMENCLATURE
CYLINDER, LANDING GEAR

SHEET 3 OF 3



SPI NO. 00-195-4810

ENGINEERING DATA LIST

REVISION: 01

DATE: 23APR03

DATA TECH: SDA

ORGN SYMBOL: LGMPM

PR NR:

APPLICATION: A-10 AIRCRAFT

PAGE 1 OF 1

CAGE: 77751

MANUFACTURER NAME: FAIRCHILD INDUSTRIES FARMINGDALE NY

REFERENCE NR: 19042-1

NOUN:

PISTON SUBASSY, SHOCK STRUT MLG

NSN: 1620010184758

CAGE

DRAWING NUMBER

REV

NR SHEETS

NR CARDS

FURN CODE

DIST CODE

NOUN

REQUIREMENTS

98747

00-ALC/LGMPM

/

0004

0000

S

ENGR DATA RQMTS (ATTACH A)

77751

19040

/

0002

0000

S

PISTON TUBE - FORGING SH ST, MLG

77751

19041

/

0001

0000

S

PISTON - MACHINGING SH ST, MLG

77751

19042

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0001

0000

S

PISTON SUBASSY SHOCK STRUT, MLG

77751

19091

/

0001

0000

S

ADAPTER ANTISKID SH ST, MLG

77751

19092

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ADAPTER, SUBASSY SH ST, MLG

77751

19093

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S

BUSHING - MLG

STANDARD ENGINEERING TEXT

ALL GOVERNMENT/MILITARY SPECIFICATIONS AND STANDARDS WILL NOT BE FURNISHED.
TO OBTAIN THESE SPECS AND STDS WRITE TO:

DODSSP

BUILDING 4/SECTION D

700 ROBINS AVE.

PHILADELPHIA PA. 19111-5098

TELEPHONE: (215) 697-2179

FAX: (215) 697-1462

TO VIEW OR ORDER: HTTP://WWW.DODSSP.DAPS.MIL

ENGINEERING DATA LIST REMARKS

FURNISHED METHOD CODE LEGEND:

C - CLASSIFIED DOCUMENT.

S - FURNISHED WITH SOLICITATION.

M - STABLE BASE DRAWING REQUIRED;

X - DATA SUPPLIED (NOT IN EDCARS).

R - FURNISHED BY PCD UPON REQUEST.

P - PARTIAL DOCUMENT FURNISHED.

V - VENDOR DRAWING;

G - GOV'T DOCUMENT.

O - OTHERS, CONTRACTOR

MUST ACQUIRE.

A - DATA NOT

REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF <div style="display: flex; justify-content: space-between; margin-top: 10px;"> PISTON SUBASSY-SHOCK STRUT, MLG A-10 </div>		
2. PART NUMBER 19042-1	3. NATIONAL STOCK NUMBER 1620-01-018-4758	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. Per Drawing requirements 19040, use Material SAE AMS-F-7190 in lieu of MIL-F-7190 and SAE AMS 6411 in lieu of AMS 6411.		
6. Per Drawing requirements 19091, use Material SAE AMS -QQ-A-200/11 in lieu of QQ-A-200/11. Alternate Material, use SAE AMS-QQ-A-225/4 in lieu of QQ-A-225/4.		
7. Per Drawing requirements 19093, use Material SAE AMS 5643 in lieu of AMS 5643.		
8. Mark & Identify per MIL-STD-130 in lieu of Z-R701.		
9. For large assemblies and components utilize the following statement in lieu of PS 16001) Serial number shall be vibropeened, or steel stamped, in 0.09" letters 0.004"-0.007" deep in the location indicated. If the drawing does not indicate a location, OO-ALC/LGHLEN will provide S/N location instructions. Serialization of item shall be accomplished as follows: The serialization will begin with the CAGE of the contractor named on the contract, followed by a dash and the 2 digit year of manufacture, followed by a dash and a sequentially unique 3 digit number. A contractor who receives numerous intermittent contracts will start serialization of item with the next number in sequence of the prior contract. If a contract produces more than 999 items, the serial number should begin using 4 digit serial numbers. The serial number should appear like this: S/N 98747-03-001."		
10. Inspection requirements are as follows: <div style="margin-left: 20px;"> <p>A. Perform fluorescent penetrant inspection per ASTM E1417, Type I, Method B or C, Level 3 or 4) in lieu of MIL-I-6866 and MIL-I-25135 with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of "NO DEFECTS ALLOWED" is that the inspection is conducted at the required sensitivity level and there will be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedure developed by a Level III as specified in NAS 410.</p> <p>B. Perform Magnetic particle inspection per ASTM E1444 in lieu of MIL-I-6868. Use full wave direct current (FWDC), wet continuous method, fluorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedure developed by a Level III as specified in NAS-410.</p> </div>		
11. Use best shop practices in lieu of the following: <div style="margin-left: 20px;"> <p>A. Machining Spec F-F101.</p> <p>B. Protect Unplated Surfaces Spec Z-P801.</p> </div>		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 14 Apr 03

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 19042-1	NATIONAL STOCK NUMBER 1620-01-018-4758	
<p>12. Heat Treat Steel per SAE AMS-H-6875 in lieu of MIL-H-6875.</p> <p>13. For parts Heat-Treated to 180 KSI and above, any surface that is ground/machined after heat treat, shall be inspected for abusive grinding/machining burns per MIL-STD-867. Grinding shall be per MIL-STD-866.</p> <p>14. Shot Peen per Drawing requirements and SAE AMS -S-13165 in lieu of MIL-S-13165.</p> <p>15. Passivate per SAE AMS-QQ-P-35 or ASTM A967 in lieu of Z-R901, Code SZ.</p> <p>16. Titanium Cadmium Plate per MIL-STD-1500 (Type II, Class 2) on Drawing 19041 and (Type II, Class 3) on Drawing 19093 in lieu of F-T402.</p> <p>17. Finish Paint Scheme as follows in lieu of Z-R901, CODE ZB, ZC, and ZZ.</p> <p style="padding-left: 40px;">A. Apply one coat Epoxy Waterborne primer per MIL-PRF-85582, Type I, Class 2. Alternate primer, one coat Epoxy-Polamide per MIL-PRF-23377, Type I.</p> <p style="padding-left: 40px;">B. Apply two topcoats of Polyurethane per MIL-PRF-85285, Type I, color #17925 (White) per FED-STD-595.</p> <p>18. After contract award the successful bidder shall provide a copy of the processing documentation (routing documents and process specifications) to LGHLEN for final review before production begins.</p> <p>19. OO-ALC/LGHLEN system engineering retains all rights to review and accept MRB'S prior to shipment of discrepant items, All deviations, minor and major, from the engineering drawing package will be submitted for MRB disposition.</p> <p>20. Prior to contract award, the contractor will certify to the government in writing, full compliance with manuals, specifications, and standards called out and required for the manufacture of this contracted landing gear component/assembly. Contractor is responsible to completely search these manuals, specifications, and standards and fully understand the requirements necessary to manufacture landing gear components. Any questions can be forwarded to this office, OO-ALC/LGHLEN.</p>		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 14 Apr 03

REV:	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 19042-1	NATIONAL STOCK NUMBER 1620-01-018-4758	
<p>21. Install Bushings per the following in lieu of G-F501:</p> <ul style="list-style-type: none"> A. The bushing installations shall be accomplished in such a manner as to avoid damage to the finish on the I.D. of the housing into which the bushing is installed, or the finish of the O.D. of the bushing. Forced installation of sub-zero installations, such as the use of a press or hammer is not permitted, and is not acceptable. A small non-metallic hammer may be used to tap the bushing into alignment with the housing bore, or to seat the bushing. B. Prior to bushing installation, the parts and housing bore shall be cleaned with a cleaning solvent to remove all contamination. C. Liquid nitrogen shall be used for all sub-zero installations unless some other sub-zero coolant is specified, and approved by OO-ALC/LGHLEN Engineering. The soak time of the bushing in the liquid nitrogen shall be sufficient allow the bushing to reach the same temperature as the coolant. D. The bushing shall be installed into the housing immediately upon removal from the coolant with an absolute minimum of lost time. Trial runs shall be accomplished as necessary to minimize installation time which should be in the order of about seven (7) seconds maximum. E. It may occasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process, which do not have paint or sealant or other organic material applied prior to heating, shall be heated by the use of radiant heat techniques, such as thermal blankets, infrared lamps etc.; to the maximum temperature of 250 F. Temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling oxidation, or corrosion shall be permitted. F. Bushings without flanges shall be installed into housing bore which has received a light coat of sealant per MIL-PRF-81733. Install shrunken bushing and wipe off any excess sealant that may have extruded around the periphery of both ends of the bushings. G. Bushings with flanges shall be installed in a similar manner as paragraph (F). Except sealant shall also be applied to face of lug under flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside face of bushing flange when bushing is installed. Wipe off any excess sealant around periphery of bushing flange forming a bead. Wipe any excess sealant from the other end of the bushing also. H. For bushings with external grease grooves the inside of the lug will be coated with MIL-C-16173 prior to bushing installation, and face of lug will be coated with MIL-PRF-81733 per paragraph G. 		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 14 Apr 03

REV:		ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 19042-1		NATIONAL STOCK NUMBER 1620-01-018-4758	
<p>22. The required forging shall be procured from the qualified forging source, using the original certified forging procedures and dies/tooling.</p> <p>A. Prior to contract award, the detail part bidder shall provide certification, from the forging source, to the Government that the certified dies and procedures are available and that the forging source has an agreement with the detail parts bidder to provide forgings for their use in the event they are the successful bidder.</p> <p>B. Prior to production, forging lot qualification shall be accomplished as specified on the forging drawing and SAE AMS-F-7190 (STEEL). The detailed part contractor shall assure that this has been accomplished by the forging source and shall submit certified documentation of accomplishment to the Government.</p> <p>23. FORGING SOURCE, CONTROL AND LOCATION OF DIES:</p> <p>1. Forging Drawing: FAIRCHILD Drawing 19040-1</p> <p>2. Die Number: 7017B</p> <p>3. Control of Forging Process: Kropp Forge Company</p> <p>4. Location of Forging Dies: Kropp Forge Company A Division of Anadite, Inc. 5301 W. Roosevelt Road Cicero, IL 60650 Phone: 708-652-6691</p>			
PREPARED BY DAVID H. ARGYLE		SYMBOL LGMPM	DATE 14 Apr 03

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN): *1620-01-018-4758
NOUN: Piston Subassy. Shock Strut MLG

PART NUMBER (P/N): 19042-1
AIRCRAFT: A-10

SECTION C.

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 19040 and specification SAE-AMS-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN): 1620-01-018-4758
NOUN: Piston Subassy, Shock Strut MLG

PART NUMBER (P/N): 19042-1
AIRCRAFT: A-10

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$3000.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D.

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

- c. This waiver will be granted if and only if the design control authority (LGHEL) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHEL reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV:

ENGINEERING DATA REQUIREMENTS

(ATTACHMENT "A")

NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.

1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF

SHOCK STRUT ASSY-NOSE LANDING GEAR

A-10

2. PART NUMBER

9927116-30

3. NATIONAL STOCK NUMBER

1620-01-467-6214

4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.

5. Use Material SAE AMS-QQ-A-200/1 in lieu of QQ-A-357 (CANCELLED), DRAWING 18795.
6. Use Material SAE AMS 5643 in lieu of AMS 5643, DRAWINGS 18832 & 18825.
7. Mark and Identify per notes 2, 3, & 4(DWG. 9927116) in lieu of Z-R701, Code RS, and Z-J901.
8. For large assemblies and components utilize the following statement in lieu of PS 16001) Serial number shall be vibropeened, or steel stamped, in 0.09" letters 0.004"-0.007" deep in the location indicated. If the drawing does not indicate a location, OO-ALC/LGHLEN will provide S/N location instructions. Serialization of item shall be accomplished as follows: The serialization will begin with the CAGE of the contractor named on the contract, followed by a dash and the 2 digit year of manufacture, followed by a dash and a sequentially unique 3 digit number. A contractor who receives numerous intermittent contracts will start serialization of item with the next number in sequence of the prior contract. If a contract produces more than 999 items, the serial number should begin using 4 digit serial numbers. The serial number should appear like this: S/N 98747-01-003."
9. Inspection requirements are as follows:
- A. Perform fluorescent penetrant inspection per ASTM E 1417, Type I, Method B or C, Level 3 or 4 in lieu of MIL-I-6866. This part shall conform to Grade A quality level classification as specified in MIL-STD-1907. The inspector performing the inspection will be Level II certified with the inspection procedure developed by a Level III as specified in NAS-410.
- B. Perform Magnetic Particle inspection per ASTM E 1444, in lieu of MIL-I-6868, fluorescent type, full wave direct current (FWDC), wet continuous method. This part shall conform to classification G rade A quality level classification as specified in MIL-STD-1907. The inspector performing the inspection will be certified to the Level II with the inspection procedure developed by a Level III as specified in NAS-410.
10. After contract award the successful bidder shall provide a copy of the processing documentation (routing documents and process specifications) to LGHLEN for final review before production begins.
11. OO-ALC/LILE system engineering retains all rights to review and accept MRB'S prior to shipment of discrepant items. All deviations, minor and major, from the engineering drawing package will be submitted for MRB disposition.
12. Prior to contract award, the contractor will certify to the government in writing, full compliance with manuals, specifications, and standards called out and required for the manufacture of this contracted landing gear component/assembly. Contractor is responsible to completely search these manuals, specifications, and standards and fully understand the requirements necessary to manufacture landing gear components. Any questions can be forwarded to this office OO-ALC/LILE.

PREPARED BY

DAVID H. ARGYLE

SYMBOL

LGMPM

DATE

20 May 03

REV:		ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 9927116-30		NATIONAL STOCK NUMBER 1620-01-467-6214	
<p>13. Install Bushings per the following in lieu of F-501.</p> <p>A. The bushing installations shall be accomplished in such a manner as to avoid damage to the finish on the I.D. of the housing into which the bushing is installed, or the finish of the O.D. of the bushing. Forced installation of sub-zero installations, such as the use of a press or hammer is not permitted, and is not acceptable. A small non-metallic hammer may be used to tap the bushing into alignment with the housing bore, or to seat the bushing.</p> <p>B. Prior to bushing installation, the parts and housing bore shall be cleaned with a cleaning solvent to remove all contamination.</p> <p>C. Liquid nitrogen shall be used for all sub-zero installations unless some other sub-zero coolant is specified, and approved by OO-ALC/LILE Engineering. The soak time of the bushing in the liquid nitrogen shall be sufficient to allow the bushing to reach the same temperature as the coolant.</p> <p>D. The bushing shall be installed into the housing immediately upon removal from the coolant with an absolute minimum of lost time. Trial runs shall be accomplished as necessary to minimize installation time which should be in the order of about seven (7) seconds maximum.</p> <p>E. It may occasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process, which do not have paint or sealant or other organic material applied prior to heating, shall be heated by the use of radiant heat techniques, such as thermal blankets, infrared lamps etc.; to the maximum temperature of 250 F. Temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling oxidation, or corrosion shall be permitted.</p> <p>F. Bushings without flanges shall be installed into housing bore which has received a light coat of sealant per MIL-PRF-81733. Install shrunken bushing and wipe off any excess sealant that may have extruded around the periphery of both ends of the bushings.</p> <p>G. Bushings with flanges shall be installed in a similar manner as paragraph (F). Except sealant shall also be applied to face of lug under flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside face of bushing flange when bushing is installed. Wipe off any excess sealant around periphery of bushing flange forming a bead. Wipe any excess sealant from the other end of the bushing also.</p> <p>H. For bushings with external grease grooves the inside of the lug will be coated with MIL-C-16173 prior to bushing installation, and face of lug will be coated with MIL-PRF-81733 per paragraph G.</p>			
PREPARED BY DAVID H. ARGYLE		SYMBOL LGMPM	DATE 20 May 03

REV:	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 9927116-30	NATIONAL STOCK NUMBER 1620-01-467-6214	
<p>14. The required forgings will be procured from the qualified forging source using the original certified forging procedures and dies/tooling.</p> <p style="margin-left: 40px;">A. Prior to contract award, the detailed part bidder shall provide certification, from the forging source, to the Government that the certified dies and procedures are available and that the forging source has an agreement with the detail parts bidder to provide forgings for their use in the event they are the successful bidder.</p> <p style="margin-left: 40px;">B. Prior to production, forging lot qualification shall be accomplished as specified on the forging drawing and SAE AMS-A-22771 for aluminum forgings. The detailed part contractor shall assure that this has been accomplished by the forging source and shall submit certified documentation of accomplishment to the Government.</p> <p>15. FORGING SOURCE, CONTROL AND LOCATION OF DIES:</p> <p style="margin-left: 40px;">A. Forging drawing: 9927116-03 Die number: 11795.51</p> <p style="margin-left: 40px;">B. Control of forging process: U. S.A.F.</p> <p style="margin-left: 40px;">C. Location of forging dies: Weber Metals Inc. 6706 South Garfield Paramount, California 90723 (562) 602-0260</p> <p>16. INSTRUCTIONS FOR QUALIFICATION OF NEW FORGING SOURCE.</p> <p style="margin-left: 40px;">Prior to contract award, the contractor will advise the government in writing of their intent to procure new forging dies and the proposed forging source. The contractor will not proceed to obtain new dies without the express consent of the government procuring agency. The government will have unlimited use of the dies developed under this contract. The contractor will inform the forging house in writing, at the same time the order for the dies is placed, that the government has unlimited use rights of the dies and forward a copy of this letter to the Contracting Officer.</p>		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 20 May 03

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN): 1620-01-467-6214
NOUN: Shock Strut Assy- Nose Landing Gear

PART NUMBER (P/N): 9927116-30
AIRCRAFT: A-10

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 9927116 and specification SAE-AMS-A-22771. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS

(PL98-525, SECTION 2319)

STOCK NR (NSN): 1620-01-467-6214

PART NUMBER (P/N): 9927116-30

NOUN: Shock Strut Assy- Nose Landing Gear

AIRCRAFT: A-10

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$3000.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LGHEL) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHEL reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REVISION: 03

* HISTORY *

[illegible]

STANDARD ENGINEERING TEXT

ENGINEERING DATA LIST REMARKS

FURNISHED METHOD CODE LEGEND:

C - CLASSIFIED DOCUMENT.

S - FURNISHED WITH SOLICITATION.

M - STABLE BASE DRAWING REQUIRED;

X - DATA SUPPLIED (NOT IN EDCARS). G - GOV'T DOCUMENT

R - FURNISHED BY PCD UPON REQUEST.

P - PARTIAL DOCUMENT FURNISHED.

V - VENDOR DRAWING;

G - GOV'T DOCUMENT

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REV: OO-ALC	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF PISTON TUBE SHOCK STRUT (NOSE LANDING GEAR) A-10		
2. PART NUMBER 18805-1	3. NATIONAL STOCK NUMBER 1620-01-012-1969	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. Use Material SAE AMS 6257 in lieu of MIL-S-8844 (CANCELLED).		
6. Grind per MIL-STD-866 and nital etch for burns per MIL-STD-867 in lieu of F-F101.		
7. Heat Treat per SAE AMS-H-6875 in lieu of MIL-H-6875.		
8. Shot Peen per SAE AMS-S-13165 in lieu of MIL-S-13165.		
9. Inspection requirements are as follows: A. Perform Magnetic particle inspection per ASTM E1444 in lieu of MIL-I-6868. Use full wave direct current (FWDC), wet continuous method, fluorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED . The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedure developed by a Level III as specified in NAS-410.		
10. Chrome Plate per MIL-STD-1501 (Class 2, Type 1) in lieu of SAE AMS-QQ-C-320.		
11. Protect unplated surfaces, using temporary coatings as required to prevent damage or deterioration during handling, per MIL-C-16173 in lieu of R-Z901, CODE ZZ.		
12. Identification and Marking per MIL-STD-130 in lieu of Z-R701.		
13. Serialization of items shall be accomplished as follows: A. "Serial number shall be vibropeened in 0.09" letters, .004 to .007" deep in the location indicated. If the drawing does not indicate a location, LILE will provide S/N location instructions. Serialization of item shall be accomplished as follows: The serialization will begin with the letters "S/N" followed by the CAGE of the contractor named on the contract, followed by a dash and the 2 digit year of manufacture, followed by a dash and a sequentially unique 3 digit number. A contractor who receives numerous intermittent contracts will start serialization of item with the next number in sequence of the prior contract. If a contract produces more than 999 items, the serial number should begin using 4 digit serial numbers. The serial number should appear like this: S/N 98747-02-001."		
14. After contract award the successful bidder shall provide a copy of the processing documentation (routing documents and process specifications) to LILE for final review before production begins.		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 3 May 02

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 18805-1	NATIONAL STOCK NUMBER 1620-01-012-1969	
<p>15. OO-ALC/LILE system engineering retains all rights to review and accept MRB'S prior to shipment of discrepant items. All deviations, minor and major, from the engineering drawing package will be submitted for MRB disposition.</p> <p>16. Prior to contract award, the contractor will certify to the government in writing, full compliance with manuals, specifications, and standards called out and required for the manufacture of this contracted landing gear component/assembly. Contractor is responsible to completely search these manuals, specifications, and standards and fully understand the requirements necessary to manufacture landing gear components. Any questions can be forwarded to this office, OO-ALC/LILE.</p>		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 3 May 02

SOURCE QUALIFICATION REQUIREMENTS
(PL 98-525, SECTION 2319)

STOCK NR (NSN) 1620-01-012-1969
NOUN: Piston tube

PART NUMBER (P/N) 18805-1
AIRCRAFT: A-10 NLG

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE

1. Because of the need for uninterrupted item support to military aircraft systems and in keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offerer an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offerer.
2. The offerer must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The required materials will be procured from a qualified source and will meet the requirements of their respective specifications. The offerer will assure that the material supplier has accomplished this and will submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
4. The qualification article shall demonstrate full compatibility and comparability with existing parts, and once submitted, will be subjected to such testing as deemed necessary by the government, to insure the article meets all dimensional, processing, and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article, no matter what its condition, shall be returned to the contractor or disposed of at his discretion and direction, whether it was found acceptable or not.
5. Form verification: The Government's Quality Verification Center will verify compliance with dimensional data requirements. Material and process compliance will also be verified as required.
6. Fit/function verification: Existing components and Government test stands/fixtures will be utilized to verify physical interface and functional performance of articles.
7. Testing for material and process compliance
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Other
8. Remarks:
 - a. Organic verification capabilities exist at OO-ALC.
 - b. Test requirements outside organic capabilities will be contracted out to independent laboratories.
9. The estimated cost of government testing and evaluation is \$2000
10. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SOURCE QUALIFICATION REQUIREMENTS
(PL 98-525, SECTION 2319)

STOCK NR (NSN) 1620-01-012-1969
NOUN: Piston tube

PART NUMBER (P/N) 18805-1
AIRCRAFT: A-10 NLG

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF CYLINDER ASSEMBLY		
2. PART NUMBER 68A450602-1001	3. NATIONAL STOCK NUMBER 1620-00-310-9830	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. OO-ALC/LILE SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT/REJECT MATERIAL REVIEW BOARD (MRB) DISPOSITIONS PRIOR TO SHIPMENT OF DISCREPANT ITEM. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE SHALL BE SUBMITTED FOR MRB DISPOSITION.		
6. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENT/ASSEMBLY. CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE LANDING GEAR COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO THE OFFICE OF OO-ALC/LILE.		
7. AFTER CONTRACT AWARD, THE SUCCESSFUL BIDDER SHALL PROVIDE A COPY OF THE PROCESSING DOCUMENTATION (ROUTING DOCUMENTS AND PROCESS SPECIFICATIONS) TO LILE FOR FINAL REVIEW BEFORE PRODUCTION BEGINS.		
8. IDENTIFICATION AND MARKING PER MIL-STD-130 AS AN ALTERNATE TO PS 16001.		
9. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: SERIAL NUMBER SHALL BE VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL), IN 0.09" LETTERS 0.004"-0.007" DEEP IN THE LOCATION INDICATED. IF THE DRAWING DOES NOT INDICATE A LOCATION, OO-ALC/LILE SHALL PROVIDE S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION SHALL BEGIN WITH THE CAGE (FSCM) OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-02-001.		
10. DIMENSIONS AND TOLERANCES PER ASME Y14.5 IN LIEU OF USASI Y14.5 AND ANSI Y14.5.		
11. THREADS PER MIL-S-8879 (SAFETY CRITICAL).		
12. PERFORM FLUORESCENT PENETRANT INSPECTION PER ASTM E 1417, TYPE I, METHOD B OR C, LEVEL 3 OR 4 IN LIEU OF PS21202 WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE VERIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.		
PREPARED BY DENISE S. BISHOP	SYMBOL LGMPM	DATE 5 Jun 02

REV:	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 68A450602-1001	NATIONAL STOCK NUMBER 1620-00-310-9830	
<p>13. ULTRASONIC INSPECTION PER MIL-STD-2154 IN LIEU OF MIL-I-8950.</p> <p>14. MATERIAL: CRES 17-4PH PER SAE AMS 5643 IN LIEU OF AMS 5643. (DWG 68A450631)</p> <p>15. SHOT PEEN PER SAE AMS-S-13165 MAY BE USED AS AN ALTERNATE TO PS 14023.</p> <p>16. HEAT TREAT PER SAE AMS-H-6875 AS AN ALTERNATE TO PS 15227.</p> <p>17. PASSIVATE PER SAE AMS-QQ-P-35 OR ASTM A967 MAY BE USED AS AN ALTERNATE TO PS13001.</p> <p>18. ANODIZE PER MIL-A-8625, TYPE II, CLASS I MAY BE USED AS AN ALTERNATE TO PS 13201.</p> <p>19. HARD COAT PER MIL-A-8625, TYPE III, CLASS 2 ("BLACK #37038") MAY BE USED AS AN ALTERNATE TO PS 13208.</p> <p>20. APPLY ONE COAT EPOXY WATERBORNE PRIMER PER MIL-PRF-85582, TYPE I, CLASS 2. ALTERNATE ONE COAT OF EPOXY POLYAMIDE PRIMER PER MIL-PRF-23377, TYPE I. APPLY TWO TOPCOATS POLYURETHANE PER MIL-PRF-85285, TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595 IN LIEU OF NOTE 22, (DRAWING PL68450602), MIL-P-23377B, MMS420 AND PS 13646.</p> <p>21. INSTALL BUSHINGS PER THE FOLLOWING AS AN ALTERNATE TO PS17034:</p> <p style="margin-left: 40px;">A. THE BUSHING INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE I.D. OF THE HOUSING INTO WHICH THE BUSHING IS INSTALLED, OR THE FINISH OF THE O.D. OF THE BUSHING. FORCED INSTALLATION OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A PRESS OR HAMMER IS NOT PERMITTED, AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER MAY BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING.</p> <p style="margin-left: 40px;">B. PRIOR TO BUSHING INSTALLATION, THE PARTS AND HOUSING BORE SHALL BE CLEANED WITH CLEANING SOLVENT TO REMOVE ALL CONTAMINATION.</p> <p style="margin-left: 40px;">C. LIQUID NITROGEN SHALL BE USED FOR ALL SUB-ZERO INSTALLATIONS UNLESS SOME OTHER SUB-ZERO COOLANT IS SPECIFIED, AND APPROVED BY OO-ALC/LILEC ENGINEERING. THE SOAK TIME OF THE BUSHING IN THE LIQUID NITROGEN SHALL BE SUFFICIENT TO ALLOW THE BUSHING TO REACH THE SAME TEMPERATURE AS THE COOLANT.</p> <p style="margin-left: 40px;">D. THE BUSHING SHALL BE INSTALLED INTO THE HOUSING IMMEDIATELY UPON REMOVAL FROM THE COOLANT WITH AN ABSOLUTE MINIMUM OF LOST TIME. TRIAL RUNS SHALL BE ACCOMPLISHED AS NECESSARY TO MINIMIZE INSTALLATION TIME WHICH SHOULD BE IN THE ORDER OF ABOUT SEVEN (7) SECONDS MAXIMUM.</p>		
PREPARED BY DENISE S. BISHOP	SYMBOL LGMPM	DATE 5 Jun 02

REV:	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 68A450602-1001	NATIONAL STOCK NUMBER 1620-00-310-9830	
<p>E. IT MAY OCCASIONALLY BE NECESSARY TO HEAT THE HOUSING INTO WHICH THE BUSHING IS TO BE INSTALLED, IN ADDITION TO SUB-ZERO COOLING OF THE BUSHING. DETAIL PARTS IN PROCESS, WHICH DO NOT HAVE PAINT OR SEALANT OR OTHER ORGANIC MATERIAL APPLIED PRIOR TO HEATING, THE PARTS SHALL BE HEATED BY THE USE OF RADIANT HEAT TECHNIQUES, SUCH AS THERMAL BLANKETS, INFRARED LAMPS ETC.; TO THE MAXIMUM TEMPERATURE OF 250 F. THE TEMPERATURE MEASURING DEVICES SHALL BE USED TO MONITOR HEAT AND SHALL BE LOCATED ON AREAS OF THE PART EXPECTED TO REACH MAXIMUM TEMPERATURE. NO SCALING, OXIDATION, OR CORROSION SHALL BE PERMITTED.</p> <p>F. BUSHINGS WITHOUT FLANGES SHALL BE INSTALLED INTO HOUSING BORE WHICH HAS RECEIVED A LIGHT COAT OF SEALANT PER MIL-S-81733. INSTALL SHRUNKEN BUSHING AND WIPE OFF ANY EXCESS SEALANT THAT MAY HAVE EXTRUDED AROUND THE PERIPHERY OF BOTH ENDS OF THE BUSHINGS.</p> <p>G. BUSHINGS WITH FLANGES SHALL BE INSTALLED IN A SIMILAR MANNER AS PARAGRAPH (F) EXCEPT SEALANT SHALL ALSO BE APPLIED TO FACE OR LUG UNDER FLANGE. SEALANT SHALL BE APPLIED IN SUCH A MANNER AS TO ENSURE COMPLETE COVERAGE OF INSIDE FACE OF BUSHING FLANGE WHEN BUSHING IS INSTALLED. WIPE OFF ANY EXCESS SEALANT AROUND PERIPHERY OF BUSHING FLANGE FORMING A BEAD. WIPE ANY EXCESS SEALANT FROM OTHER END OF BUSHING ALSO.</p> <p>H. FOR BUSHINGS WITH EXTERNAL GREASE GROOVES THE INSIDE OF THE LUG WILL BE COATED WITH MIL-C-16173 PRIOR TO BUSHING INSTALLATION AND FACE OF LUG WILL BE COATED WITH MIL-S-81733 PER PARAGRAPH G.</p> <p>22. FOR DRAWING CLARIFICATION THE FOLLOWING APPLIES:</p> <p style="padding-left: 40px;">A. THE .625 INCH LUG LENGTH SHOULD BE A (TYPICAL) ALSO APPLYING TO THE MATING LUG (SHEET 1, ZONE C9).</p> <p>23. USE MIL-STD-1537 AS AN ALTERNATE TO MMS-141.</p> <p>24. THE FOLLOWING DRAWINGS ARE NOT REQUIRED FOR MANUFACTURE OF THIS ITEM: 40M114, 40M129, 40M114, CPC850A100 AND FINISH SPECIFICATION 68A900000.</p> <p>25. FORGING REQUIREMENTS:</p> <p style="padding-left: 40px;">A. THE FORGING SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.</p> <p style="padding-left: 40px;">1. PRIOR TO CONTRACT AWARD, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION, FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PARTS BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.</p>		
PREPARED BY DENISE S. BISHOP	SYMBOL LGMPM	DATE 5 Jun 02

REV:		ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 68A450602-1001		NATIONAL STOCK NUMBER 1620-00-310-9830	
<p>2. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 FOR STEEL FORGINGS AND SAE AMS-A-22771 FOR ALUMINUM FORGINGS. THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.</p> <p>B. FORGING SOURCE, CONTROL AND LOCATION:</p> <p>1. FORGING DRAWING: 68A450602-2001</p> <p>2. CONTROL OF FORGING PROCESS: MCDONNELL</p> <p>3. LOCATION OF FORGING DIES: WEBER METALS 16706 S. GARFIELD PARAMOUNT, CA 90723 PHONE: (562) 602-0260</p> <p>4. DIE NUMBER 11445.31</p> <p>26. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL ADVISE THE GOVERNMENT IN WRITING OF THE INTENT TO PROCURE NEW FORGING DIES AND THE PROPOSED FORGING SOURCE. THE CONTRACTOR SHALL NOT PROCEED TO OBTAIN NEW FORGING DIES WITHOUT THE EXPRESS WRITTEN CONSENT OF THE GOVERNMENT-PROCURING ACTIVITY. THE GOVERNMENT SHALL HAVE UNLIMITED USE OF THE DIES DEVELOPED UNDER THIS CONTRACT. THE CONTRACTOR SHALL INFORM THE FORGING HOUSE IN WRITING, AT THE SAME TIME OF THE ORDER FOR THE DIES IS PLACED, THAT THE GOVERNMENT HAS UNLIMITED USE RIGHTS OF THE DIES AND FORWARD A COPY OF THIS LETTER TO THE GOVERNMENT CONTRACTING OFFICER.</p>			
PREPARED BY DENISE S. BISHOP		SYMBOL LGMPM	DATE 5 Jun 02

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-310-9830

PART NUMBER (P/N) 68A450602-1001

NOUN: Cylinder Assembly, Nose Landing Gear

AIRCRAFT: F-15

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 68A450602-2001 and specification MIL-A-22771. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS

(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-310-9830

PART NUMBER (P/N) 68A450602-1001

NOUN: Cylinder Assembly, Nose Landing Gear

AIRCRAFT: F-15

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$3000.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV: A	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS /STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF CYLINDER ASSEMBLY-MAIN LANDING GEAR		
2. PART NUMBER 68A410702-1006	3. NATIONAL STOCK NUMBER 1620-01-075-3562	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
<p>5. Use Material SAE AMS 6419 in lieu of AMS 6419, (Drawing 68A410602).</p> <p>6. Use Material SAE AMS 5629 in lieu of AMS 5629, (Drawing 68A410670).</p> <p>7. Use Material SAE AMS 4640 in lieu of AMS 4640. Alternate Material use SAE AMS 4590 in lieu of AMS 4590. (Drawing 68A410720).</p> <p>8. Use Material ASTM B196 in lieu of QQ-C-530, (Drawing 68A410720, Note 15).</p> <p>9. Inspection requirements are as follows:</p> <p>A. Perform fluorescent penetrant inspection in lieu of PS 21202, per ASTM E1417, Type I, Method B or C. Level 3 or 4 with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of "NO DEFECTS ALLOWED" is that the inspection is conducted at the required sensitivity level and there will be no indications allowed. The inspector performing the inspection will be certified to Level II with the inspection procedures developed by a Level III as specified in NAS 410.</p> <p>B. Perform Magnetic particle inspection per ASTM E1444, in lieu of PS 21201. Use full wave direct current (FWDC), wet continuous method, fluorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of "NO DEFECTS ALLOWED" is that the inspection is conducted at the required sensitivity level and there will be no indications allowed. The inspector performing the inspection will be certified to Level II with the inspection procedures developed by a Level III as specified in NAS 410.</p> <p>10. Mark & Identify per MIL-STD-130, as an alternate to PS 16001 per drawing requirements.</p> <p>11. Serialization of item shall be accomplished as follows:</p> <p>A. Serial number shall be vibropeened, or steel stamped, in 0.09" letters 0.004"-0.007" deep in the location indicated. If the drawing does not indicate a location, OO-ALC/LILE will provide S/N location instructions. Serialization of item shall be accomplished as follows: The serialization will begin with the CAGE of the contractor named on the contract, followed by a dash and the 2 digit year of manufacture, followed by a dash and a sequentially unique 3 digit number. A contractor who receives numerous intermittent contracts will start serialization of item with the next number in sequence of the prior contract. If a contract produces more than 999 items, the serial number should begin using 4 digit serial numbers. The serial number should appear like this: S/N 98747-95-001."</p>		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 13 Mar 03

REV: A	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 68A410702-1006	NATIONAL STOCK NUMBER 1620-01-075-3562	
<p>12. Heat Treat per SAE AMS-H-6875 as an alternate to PS 15296. Drawing 68A410702(Note 14) and Drawing 68A410602 (Note 16).</p> <p>13. Heat Treat per SAE AMS-H-6875 as an alternate to PS 15238, Drawing 68A410670(Note 6).</p> <p>14. Heat Treat per SAE AMS-H-7199 as an alternate to PS 15935, Drawing 68A410720(Note 15).</p> <p>15. Temper Etch Inspect per MIL-STD-867 as an alternate to PS 21205 & PS 23006. Drawing 68A410702(Note 17), Drawing 68A410602 (Note 19), and (Note XI, Forging Notes).</p> <p>16. Shot Peen per SAE AMS-S-13165 as an alternate to PS 14023. Drawing 68A410702(Note 23) and Drawing 68A410602 (Note 23).</p> <p>17. Passivate per SAE AMS-QQ-P-35, ASTM A967(Type 5) as an alterenate to PS 13001. Drawing 68A410670(Note 9).</p> <p>18. Forging Cleanliness per SAE AMS 2300 in lieu of AMS 2300. Drawing 68A410602 (Note 10).</p> <p>19. Chromium Plate per MIL-STD-1501(Type II, Class 3) as an alternate to PS 13102. Drawing 68A410702(Notes 26 & 28) and Drawing 68A410602(Notes 26 & 28).</p> <p>20. Low Embrittlement Cadmium Plate per MIL-STD-870 (Type II, Class 1) as an alternate to PS 13144. Drawing 68A410702, NOTE 19.</p> <p>21. Low Embrittlement Cadmium Plate per MIL-STD-870 (Type I, Class 2) as an alternate to PS 13144. Drawing 68AA410602, NOTE 35.</p> <p>22. Finish Specification 68A900000 is not required and will not be furnished. Finish per the following in lieu of PS 13646:</p> <p style="padding-left: 40px;">A. Apply one coat Epoxy Waterborne primer per MIL-PRF-85582, Type I, Class 2. Alternate primer, one coat Epoxy-Polamide per MIL-PRF-23377, Type I.</p> <p style="padding-left: 40px;">B. Apply two topcoats of Polyurethane per MIL-PRF-85285, Type I, color #17925 (White) per FED-STD-595.</p> <p>23. OO-ALC/LILE system engineering retains all rights to review and accept MRB'S prior to shipment of discrepant items. All deviations, minor and major, from the engineering drawing package will be submitted for MRB disposition.</p> <p>24. Prior to contract award, the contractor will certify to the government in writing, full compliance with manuals, specifications, and standards called out and required for the manufacture of this contracted landing gear component/assembly. Contractor is responsible to completely search these manuals, specifications, and standards and fully understand the requirements necessary to manufacture landing gear components. Any questions can be forwarded to this office OO-ALC/LILE.</p>		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 13 Mar 03

REV: A	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 68A410702-1006	NATIONAL STOCK NUMBER 1620-01-075-3562	
<p>25. Install Bushings per the following, as an alternate to PS 17034:</p> <p>A. The bushing installations shall be accomplished in such a manner as to avoid damage to the finish on the I.D. of the housing into which the bushing is installed, or the finish of the O.D. of the bushing. Forced installation of sub-zero installations, such as the use of a press or hammer is not permitted, and is not acceptable. A small non-metallic hammer may be used to tap the bushing into alignment with the housing bore, or to seat the bushing.</p> <p>B. Prior to bushing installation, the parts and housing bore shall be cleaned with a cleaning solvent to remove all contamination.</p> <p>C. Liquid nitrogen shall be used for all sub-zero installations unless some other sub-zero coolant is specified, and approved by OO-ALC/LILE Engineering. The soak time of the bushing in the liquid nitrogen shall be sufficient to allow the bushing to reach the same temperature as the coolant.</p> <p>D. The bushing shall be installed into the housing immediately upon removal from the coolant with an absolute minimum of lost time. Trial runs shall be accomplished as necessary to minimize installation time which should be in the order of about seven (7) seconds maximum.</p> <p>E. It may occasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process, which do not have paint or sealant or other organic material applied prior to heating, shall be heated by the use of radiant heat techniques, such as thermal blankets, infrared lamps etc.; to the maximum temperature of 250 F. Temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling oxidation, or corrosion shall be permitted.</p> <p>F. Bushings without flanges shall be installed into housing bore which has received a light coat of sealant per BMS 3-27 (CORBAN 027L), available from Zip Chem Products. Install shrunken bushing and wipe off any excess sealant that may have extruded around the periphery of both ends of the bushings.</p> <p>G. Bushings with flanges shall be installed in a similar manner as paragraph F, except sealant shall also be applied to face of lug under flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside face of bushing flange when bushing is installed. Wipe off any excess sealant around periphery of bushing flange. Wipe any excess sealant from other end of bushing also. There will not be a bead of sealant about the bushing flange.</p> <p>H. For bushings with external grease grooves the inside of the lug will be coated with MIL-C-16173E, Class II prior to bushing installation, and face of lug will be coated with BMS 3-27 (CORBAN 027L), per paragraph G if the applicable bushing has a flange.</p> <p>Cor-Ban 27L (Formerly ZC-027L) Manufacturer: Zip Chem Products 400 Jarvis Drive Morgan Hill, CA 95037 800-648-2661</p>		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 13 Mar 03

REV: A	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 68A410702-1006	NATIONAL STOCK NUMBER 1620-01-075-3562	
<p>26. The required forgings will be procured from the qualified forging source using the original certified forging procedures and dies/tooling.</p> <p>A. Prior to contract award the detail part bidder will provide certification from the forging source, to the government that the certified dies and and forging procedures are available and that the forging source has an agreement with the detail part bidder to provide forgings for their use in the event they are the successful bidder.</p> <p>B. Prior to production, forging lot qualification will be accomplished as specified on the forging drawing and SAE AMS-F-7190 (STEEL). The contractor will assure that this is, or has been accomplished by the forging source and will submit certified documentation of accomplishment to the Government.</p> <p>27. FORGING SOURCE, CONTROL AND LOCATION OF DIES:</p> <p>A. Forging drawing: 68A410602-2013 Die number: 6742</p> <p>B. Control of forging process: MCDONNEL DOUGLAS CORP.</p> <p>C. Location of forging dies: KROPP FORGE COMPANY A DIVISION OF ANADITE, INC. 5301 W. ROOSEVELT ROAD CICERO, IL. 60650-1273 PH. (708) 652-6691 P.O.C. CHUCK EXT. 324</p>		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 13 Mar 03

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-01-075-3562

PART NUMBER (P/N) 68A410702-1006

NOUN: Cylinder Assembly-Main landing gear

AIRCRAFT: F-15

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 68A410702-1006 and specification SAE-AMS-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-01-075-3562
NOUN: Cylinder Assembly-Main landing gear

PART NUMBER (P/N) 68A410702-1006
AIRCRAFT: F-15

10. Remarks:

- a. Organic verification capabilities exist at OO-AIC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$5,000.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-AIC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF <div style="display: flex; justify-content: space-between; margin-top: 10px;"> CYLINDER ASSY-NOSE LANDING GEAR F-15 </div>		
2. PART NUMBER 68A452602-1001	3. NATIONAL STOCK NUMBER 1620-01-233-2153	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. Use Material ASTM B196, ASTM 197, and ASTM B194 in lieu of QQ-C-530. (DRAWING 68A452630)		
6. Use Material ASTM B196, ASTM B197, and ASTM B194 in lieu of QQ-C-530. Alternate Material, use SAE AMS4533 in lieu of AMS 4533, SAE AMS 4534 in lieu of AMS 4534, and SAE AMS 4535 in lieu of AMS 4535. (DWG. 68A450631)		
7. Mark & Identify per MIL-STD-130, as an alternate to PS 16001.		
8. For large assemblies and components utilize the following statement in lieu of PS 16001) Serial number shall be vibropeened, or steel stamped, in 0.09" letters 0.004"-0.007" deep in the location indicated. If the drawing does not indicate a location, OO-ALC/LGHLEN will provide S/N location instructions. Serialization of item shall be accomplished as follows: The serialization will begin with the CAGE of the contractor named on the contract, followed by a dash and the 2 digit year of manufacture, followed by a dash and a sequentially unique 3 digit number. A contractor who receives numerous intermittent contracts will start serialization of item with the next number in sequence of the prior contract. If a contract produces more than 999 items, the serial number should begin using 4 digit serial numbers. The serial number should appear like this: " S/N 98747-03-001."		
9. Inspection requirements are as follows: <div style="margin-left: 20px;"> <p>A. Perform fluorescent penetrant inspection per ASTM E1417, Type I, Method B or C, Level 3 or 4) in lieu of PS 21202 with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of "NO DEFECTS ALLOWED" is that the inspection is conducted at the required sensitivity level and there will be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedures developed by a Level III as specified in NAS 410.</p> <p>B. Ultrasonic Inspection per MIL-STD-2154 may be used as an alternate to MIL-I-8950.</p> </div>		
10. Shot Peen per SAE AMS -S-13165 as an alternate to PS 14023, all requirements of Drawing 68A452602 (NOTE 19) will be accomplished.		
11. Heat Treat per SAE AMS-H-7199 as an alternate to PS 15935, DRAWING 68A450631 (NOTE 15).		
12. For parts Heat-Treated to 180 KSI and above, any surface that is ground/machined after heat treat, shall be inspected for abusive grinding/machining burns per MIL-STD-867. Grinding shall be per MIL-STD-866.		
13. Anodize per MIL-A-8625 (TYPE II, CLASS I) may be used as an alternate to PS 13201.		
14. Hard Anodize per MIL-A-8625 (Type III, Class 3), color "BLACK" #37038 per FED-STD-595 as an alternate to PS 13208.		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 21 May 03

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 68A452602-1001	NATIONAL STOCK NUMBER 1620-01-233-2153	
<p>15. Cadmium Plate per MIL-STD-870 (Type II, Class2) as an alternate to PS 13101.</p> <p>16. Finish Specification 68A900000 and 40M114 will not be furnished. Finish per the the following as an alternate to PS 13646:</p> <p style="padding-left: 40px;">A. Apply one coat Epoxy Waterborne primer per MIL-PRF-85582, Type I, Class 2. Alternate primer, one coat Epoxy-Polamide per MIL-PRF-23377, Type I.</p> <p style="padding-left: 40px;">B. Apply two topcoats of Polyurethane per MIL-PRF-85285, Type I, color #17925 (White) per FED-STD-595.</p> <p>17. After contract award the successful bidder shall provide a copy of the processing documentation (routing documents and process specifications) to LGHLEN for final review before production begins.</p> <p>18. OO-ALC/LGHLEN system engineering retains all rights to review and accept MRB'S prior to shipment of discrepant items, All deviations, minor and major, from the engineering drawing package will be submitted for MRB disposition.</p> <p>19. Prior to contract award, the contractor will certify to the government in writing, full compliance with manuals, specifications, and standards called out and required for the manufacture of this contracted landing gear component/assembly. Contractor is responsible to completely search these manuals, specifications, and standards and fully understand the requirements necessary to manufacture landing gear components. Any questions can be forwarded to this office, OO-ALC/LGHLEN.</p>		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 21 May 03

REV:	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 68A452602-1001	NATIONAL STOCK NUMBER 1620-01-233-2153	
<p>20. The required forging shall be procured from the qualified forging source, using the original certified forging procedures and dies/tooling.</p> <p style="margin-left: 40px;">A. Prior to contract award, the detail part bidder shall provide certification, from the forging source, to the Government that the certified dies and procedures are available and that the forging source has an agreement with the detail parts bidder to provide forgings for their use in the event they are the successful bidder.</p> <p style="margin-left: 40px;">B. Prior to production, forging lot qualification shall be accomplished as specified on the forging drawing and SAE AMS-A-22771 (ALUMINUM). The detailed part contractor shall assure that this has been accomplished by the Forging source and shall submit certified documentation of accomplishment to the Government.</p> <p>21. FORGING SOURCE, CONTROL AND LOCATION OF DIES:</p> <p style="margin-left: 40px;">A. Forging Drawing: 68A452602-2009</p> <p style="margin-left: 40px;">2. Die Number: 12027.31</p> <p style="margin-left: 40px;">3. Control of Forging Process: McDonnell Douglas Corp.</p> <p style="margin-left: 40px;">4. Location of Forging Dies: WEBER METALS, INC. 16706 S. GARFIELD AVE. PARAMOUNT, CA. 90723-0318 562-602-0260</p> <p>22. INSTRUCTIONS FOR QUALIFICATION OF NEW FORGING SOURCE.</p> <p style="margin-left: 40px;">Prior to contract award, the contractor shall advise the Government in writing of their intent to procure new forging dies and the proposed forging source. The contractor shall not proceed to obtain new forging dies without the express written consent of the Government- procuring activity. The Government shall have unlimited use of the dies developed under this contract. The contractor shall inform the forging house in writing, at the same time of the order for the dies is placed, that the Government has unlimited use rights of the dies and forward a copy of this letter to the Government Contracting Officer.</p>		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 21 May 03

REV:	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 68A452602-1001	NATIONAL STOCK NUMBER 1620-01-233-2153	
<p>23. Apply a thin coating of primer per MIL-PRF-23377 or MIL-PRF-85582 (AFTER CADMIUM PLATING) to all bushing bores and allow to fully cure prior to installation of bushing (PRIMER SHALL NOT OBSTRUCT GREASE PASSAGES).</p> <p>24. Install Bushings per the following, as an alternate to PS 17034:</p> <p>A. The bushing installations shall be accomplished in such a manner as to avoid damage to the finish on the I.D. of the housing into which the bushing is installed, or the finish of the O.D. of the bushing. Forced installation of sub-zero installations, such as the use of a press or hammer is not permitted, and is not acceptable. A small non-metallic hammer may be used to tap the bushing into alignment with the housing bore, or to seat the bushing.</p> <p>B. Prior to bushing installation, the parts and housing bore shall be cleaned with a cleaning solvent to remove all contamination.</p> <p>C. Liquid nitrogen shall be used for all sub-zero installations unless some other sub-zero coolant is specified, and approved by OO-ALC/LILE Engineering. The soak time of the bushing in the liquid nitrogen shall be sufficient to allow the bushing to reach the same temperature as the coolant.</p> <p>D. The bushing shall be installed into the housing immediately upon removal from the coolant with an absolute minimum of lost time. Trial runs shall be accomplished as necessary to minimize installation time which should be in the order of about seven (7) seconds maximum.</p> <p>E. It may occasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process, which do not have paint or sealant or other organic material applied prior to heating, shall be heated by the use of radiant heat techniques, such as thermal blankets, infrared lamps etc.; to the maximum temperature of 250 F. Temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling oxidation, or corrosion shall be permitted.</p> <p>F. Bushings without flanges shall be installed into housing bore which has received a light coat of sealant per MIL-PRF-81733. Install shrunken bushing and wipe off any excess sealant that may have extruded around the periphery of both ends of the bushings.</p> <p>G. Bushings with flanges shall be installed in a similar manner as paragraph (F). Except sealant shall also be applied to face of lug under flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside face of bushing flange when bushing is installed. Wipe off any excess sealant around periphery of bushing flange forming a bead. Wipe any excess sealant from the other end of the bushing also.</p> <p>H. For bushings with external grease grooves the inside of the lug will be coated with MIL-C-16173 prior to bushing installation, and face of lug will be coated with MIL-PRF-81733 per paragraph G.</p>		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 21 May 03

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN)1620012332153
NOUN: Cylinder-assy. NLG

PART NUMBER (P/N)68A452602-1001
AIRCRAFT: F-15

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 68A452602-2009 and specification MIL-A-22771. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS

(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620012332153

PART NUMBER (P/N) 68A452602-1001

NOUN: Cylinder-assy, NLG

AIRCRAFT: F-15

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$2000.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LGHLEN) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHLEN reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV: A	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS /STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF CYLINDER ASSEMBLY-MAIN LANDING GEAR		
2. PART NUMBER 68A410702-1005	3. NATIONAL STOCK NUMBER 1620-01-076-0547	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. Use Material SAE AMS 6419 in lieu of AMS 6419, (Drawing 68A410602).		
6. Use Material SAE AMS 5629 in lieu of AMS 5629, (Drawing 68A410670).		
7. Use Material SAE AMS 4640 in lieu of AMS 4640. Alternate Material use SAE AMS 4590 in lieu of AMS 4590. (Drawing 68A410720).		
8. Use Material ASTM B196 in lieu of QQ-C-530, (Drawing 68A410720, Note 15).		
9. Inspection requirements are as follows:		
A. Perform fluorescent penetrant inspection in lieu of PS 21202, per ASTM E1417, Type I, Method B or C. Level 3 or 4 with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of "NO DEFECTS ALLOWED" is that the inspection is conducted at the required sensitivity level and there will be no indications allowed. The inspector performing the inspection will be certified to Level II with the inspection procedures developed by a Level III as specified in NAS 410.		
B. Perform Magnetic particle inspection per ASTM E1444, in lieu of PS 21201. Use full wave direct current (FWDC), wet continuous method, fluorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of "NO DEFECTS ALLOWED" is that the inspection is conducted at the required sensitivity level and there will be no indications allowed. The inspector performing the inspection will be certified to Level II with the inspection procedures developed by a Level III as specified in NAS 410.		
10. Mark & Identify per MIL-STD-130, as an alternate to PS 16001 per drawing requirements.		
11. Serialization of item shall be accomplished as follows:		
A. Serial number shall be vibropeened, or steel stamped, in 0.09" letters 0.004"-0.007" deep in the location indicated. If the drawing does not indicate a location, OO-ALC/LILE will provide S/N location instructions. Serialization of item shall be accomplished as follows: The serialization will begin with the CAGE of the contractor named on the contract, followed by a dash and the 2 digit year of manufacture, followed by a dash and a sequentially unique 3 digit number. A contractor who receives numerous intermittent contracts will start serialization of item with the next number in sequence of the prior contract. If a contract produces more than 999 items, the serial number should begin using 4 digit serial numbers. The serial number should appear like this: S/N 98747-95-001."		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 13 Mar 03

REV: A	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 68A410702-1005	NATIONAL STOCK NUMBER 1620-01-076-0547	
<p>12. Heat Treat per SAE AMS-H-6875 as an alternate to PS 15296. Drawing 68A410702(Note 14) and Drawing 68A410602 (Note 16).</p> <p>13. Heat Treat per SAE AMS-H-6875 as an alternate to PS 15238, Drawing 68A410670(Note 6).</p> <p>14. Heat Treat per SAE AMS-H-7199 as an alternate to PS 15935, Drawing 68A410720(Note 15).</p> <p>15. Temper Etch Inspect per MIL-STD-867 as an alternate to PS 21205 & PS 23006. Drawing 68A410702(Note 17), Drawing 68A410602 (Note 19), and (Note XI, Forging Notes).</p> <p>16. Shot Peen per SAE AMS-S-13165 as an alternate to PS 14023. Drawing 68A410702(Note 23) and Drawing 68A410602 (Note 23).</p> <p>17. Passivate per SAE AMS-QQ-P-35, ASTM A967(Type 5) as an alterenate to PS 13001. Drawing 68A410670(Note 9).</p> <p>18. Forging Cleanliness per SAE AMS 2300 in lieu of AMS 2300. Drawing 68A410602 (Note 10).</p> <p>19. Chromium Plate per MIL-STD-1501(Type II, Class 3) as an alternate to PS 13102. Drawing 68A410702(Notes 26 & 28) and Drawing 68A410602(Notes 26 & 28).</p> <p>20. Low Embrittlement Cadmium Plate per MIL-STD-870 (Type II, Class 1) as an alternate to PS 13144. Drawing 68A410702, NOTE 19.</p> <p>21. Low Embrittlement Cadmium Plate per MIL-STD-870 (Type I, Class 2) as an alternate to PS 13144. Drawing 68AA410602, NOTE 35.</p> <p>22. Finish Specification 68A900000 is not required and will not be furnished. Finish per the following in lieu of PS 13646:</p> <p style="padding-left: 40px;">A. Apply one coat Epoxy Waterborne primer per MIL-PRF-85582, Type I, Class 2. Alternate primer, one coat Epoxy-Polamide per MIL-PRF-23377, Type I.</p> <p style="padding-left: 40px;">B. Apply two topcoats of Polyurethane per MIL-PRF-85285, Type I, color #17925 (White) per FED-STD-595.</p> <p>23. OO-ALC/LILE system engineering retains all rights to review and accept MRB'S prior to shipment of discrepant items. All deviations, minor and major, from the engineering drawing package will be submitted for MRB disposition.</p> <p>24. Prior to contract award, the contractor will certify to the government in writing, full compliance with manuals, specifications, and standards called out and required for the manufacture of this contracted landing gear component/assembly. Contractor is responsible to completely search these manuals, specifications, and standards and fully understand the requirements necessary to manufacture landing gear components. Any questions can be forwarded to this office OO-ALC/LILE.</p>		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 13 Mar 03

REV: A	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 68A410702-1005	NATIONAL STOCK NUMBER 1620-01-076-0547	
<p>25. Install Bushings per the following, as an alternate to PS 17034:</p> <p>A. The bushing installations shall be accomplished in such a manner as to avoid damage to the finish on the I.D. of the housing into which the bushing is installed, or the finish of the O.D. of the bushing. Forced installation of sub-zero installations, such as the use of a press or hammer is not permitted, and is not acceptable. A small non-metallic hammer may be used to tap the bushing into alignment with the housing bore, or to seat the bushing.</p> <p>B. Prior to bushing installation, the parts and housing bore shall be cleaned with a cleaning solvent to remove all contamination.</p> <p>C. Liquid nitrogen shall be used for all sub-zero installations unless some other sub-zero coolant is specified, and approved by OO-ALC/LILE Engineering. The soak time of the bushing in the liquid nitrogen shall be sufficient to allow the bushing to reach the same temperature as the coolant.</p> <p>D. The bushing shall be installed into the housing immediately upon removal from the coolant with an absolute minimum of lost time. Trial runs shall be accomplished as necessary to minimize installation time which should be in the order of about seven (7) seconds maximum.</p> <p>E. It may occasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process, which do not have paint or sealant or other organic material applied prior to heating, shall be heated by the use of radiant heat techniques, such as thermal blankets, infrared lamps etc.; to the maximum temperature of 250 F. Temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling oxidation, or corrosion shall be permitted.</p> <p>F. Bushings without flanges shall be installed into housing bore which has received a light coat of sealant per BMS 3-27 (CORBAN 027L), available from Zip Chem Products. Install shrunk bushing and wipe off any excess sealant that may have extruded around the periphery of both ends of the bushings.</p> <p>G. Bushings with flanges shall be installed in a similar manner as paragraph F, except sealant shall also be applied to face of lug under flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside face of bushing flange when bushing is installed. Wipe off any excess sealant around periphery of bushing flange. Wipe any excess sealant from other end of bushing also. There will not be a bead of sealant about the bushing flange.</p> <p>H. For bushings with external grease grooves the inside of the lug will be coated with MIL-C-16173E, Class II prior to bushing installation, and face of lug will be coated with BMS 3-27 (CORBAN 027L), per paragraph G, if the applicable bushing has a flange.</p> <p>Cor-Ban 27L (Formerly ZC-027L) Manufacturer: Zip Chem Products 400 Jarvis Drive Morgan Hill, CA 95037 800-648-2661</p>		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 13 Mar 03

REV: A	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 68A410702-1005	NATIONAL STOCK NUMBER 1620-01-076-0547	
<p>26. The required forgings will be procured from the qualified forging source using the original certified forging procedures and dies/tooling.</p> <p>A. Prior to contract award the detail part bidder will provide certification from the forging source, to the government that the certified dies and and forging procedures are available and that the forging source has an agreement with the detail part bidder to provide forgings for their use in the event they are the successful bidder.</p> <p>B. Prior to production, forging lot qualification will be accomplished as specified on the forging drawing and SAE AMS-F-7190 (STEEL). The contractor will assure that this is, or has been accomplished by the forging source and will submit certified documentation of accomplishment to the Government.</p> <p>27. FORGING SOURCE, CONTROL AND LOCATION OF DIES:</p> <p>A. Forging drawing: 68A410602-2013 Die number: 6742</p> <p>B. Control of forging process: MCDONNEL DOUGLAS CORP.</p> <p>C. Location of forging dies: KROPP FORGE COMPANY A. DIVISION OF ANADITE, INC. 5301 W. ROOSEVELT ROAD CICERO, IL. 60650-1273 PH. (708) 652-6691 P.O.C. CHUCK EXT. 324</p>		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPM	DATE 13 Mar 03

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-01-076-0547
NOUN: Cylinder Assembly-Main Landing Gear

PART NUMBER (P/N) 68A410702-1005
AIRCRAFT: F-15

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 68A410702-1005 and specification SAE-AMS-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-01-076-0547
NOUN: Cylinder Assembly-Main Landing Gear

PART NUMBER (P/N) 68A410702-1005
AIRCRAFT: F-15

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$5,000.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV:

ENGINEERING DATA REQUIREMENTS

(ATTACHMENT "A")

NOTE: MILITARY SPECIFICATIONS/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.

1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF

CYLINDER ASSEMBLY-MAIN LANDING GEAR

2. PART NUMBER

68A412702-1001

3. NATIONAL STOCK NUMBER

1620-01-235-2927

4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.

5. OO-ALC/LILE SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT/REJECT MATERIAL REVIEW BOARD (MRB) DISPOSITIONS PRIOR TO SHIPMENT OF DISCREPANT ITEM. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE SHALL BE SUBMITTED FOR MRB DISPOSITION.

6. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENT/ASSEMBLY. CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE LANDING GEAR COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO THE OFFICE OF OO-ALC/LILE.

7. AFTER CONTRACT AWARD, THE SUCCESSFUL BIDDER SHALL PROVIDE A COPY OF THE PROCESSING DOCUMENTATION (ROUTING DOCUMENTS AND PROCESS SPECIFICATIONS) TO LILE FOR FINAL REVIEW BEFORE PRODUCTION BEGINS.

8. IDENTIFICATION AND MARKING PER MIL-STD-130 AS AN ALTERNATE TO PS 16001.

9. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: SERIAL NUMBER SHALL BE VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL), IN 0.09" LETTERS 0.004"-0.007" DEEP IN THE LOCATION INDICATED. IF THE DRAWING DOES NOT INDICATE A LOCATION, OO-ALC/LILE SHALL PROVIDE S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION SHALL BEGIN WITH THE CAGE (FSCM) OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-00-001.

10. MATERIAL SPECIFICATIONS:

300M STEEL MATERIAL PER SAE AMS 6419 IN LIEU OF AMS 6419.

17-4PH MATERIAL PER SAE AMS 5643 IN LIEU OF AMS 5643.

BERYLLIUM COPPER MATERIAL PER ASTM B 196 IN LIEU OF QQ-C-530.

11. MATERIAL CLEANLINESS PER SAE AMS 2300 IN LIEU OF AMS 2300.

12. SHOT PEEN PER SAE AMS-S-13165 MAY BE USED AS AN ALTERNATE TO PS 14023, BUT ALL REQUIREMENTS OF DRAWING 68A412702, NOTE 23 WILL BE ACCOMPLISHED WITH EXCEPTION NOTED ON DRAWING.

PREPARED BY

DENISE S. BISHOP

SYMBOL

LGMPM

DATE

26 FEB 02

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 68A412702-1001	NATIONAL STOCK NUMBER 1620-01-235-2927	
<p>13. TEMPER ETCH PER MIL-STD-867 AS AN ALTERNATE TO PS 21205</p> <p>14. INSPECTION PER SAE AMS-F-7190 AS AN ALTERNATE TO PS 23006.</p> <p>15. PASSIVATE PER SAE AMS-QQ-P-35, ASTM A967 AS AN ALTERNATE TO PS 13001.</p> <p>16. HEAT TREAT PER SAE AMS-H-7199 AS AN ALTERNATE TO PS 15935.</p> <p>17. HEAT TREAT PER SAE AMS-H-6875 AS AN ALTERNATE TO PS 15296 , PS 15227 AND PS 15351 IN LIEU OF PS 15251 (NOTE 14, DWG 68A412702).</p> <p>18. PARTS HEAT TREATED TO 180KSI AND ABOVE: ANY SURFACE GROUND/MACHINED AFTER HEAT TREAT, SHALL BE INSPECTED FOR ABUSIVE GRINDING/MACHINING BURNS PER MIL-STD-867. GRINDING SHALL BE PER MIL-STD-866.</p> <p>19. CADMIUM PLATE PER MIL-STD-870 TYPE II ,CLASS 1 IN LIEU OF PS 13444.</p> <p>20. CADMIUM PLATE PER SAE AMS-QQ-P-416 IN LIEU OF QQ-P-416.</p> <p>21. CHROMIUM PLATE PER MIL-STD-1501 TYPE I OR II, CLASS 2 AS AN ALTERNATE TO PS 13102.</p> <p>22. INSPECTION REQUIREMENTS ARE AS FOLLOWS:</p> <p style="margin-left: 40px;">A. MAGNETIC PARTICLE INSPECTION PER ASTM E1444 IN LIEU OF PS 21201. FULL WAVE DIRECT CURRENT (FWDC), WET CONTINUOUS METHOD, FLUORESCENT TYPE WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED I NAS-410.</p> <p style="margin-left: 40px;">B. FLUORESCENT PENETRANT INSPECTION PER ASTM E1417, TYPE I, METHOD B OR C LEVEL 3 OR 4 IN LIEU OF PS 21202 WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH HE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.</p> <p>23. FINISH SPECIFICATION 68A900000 WILL NOT BE FURNISHED. THE FOLLOWING FINISH MAY BE USED AS AN ALTERNATE TO PS 13646 (NOTE 31, DWG 68A412702):</p> <p style="margin-left: 40px;">A. APPLY ONE COAT EPOXY WATERBORN PRIMER PER MIL-PRF-85582, TYPE I, CLASS 2. ALTERNATE ONE COAT OF EPOXY POLYIMIDE PRIMER PER MIL-PRF-23377, TYPE I IN LIEU OF MIL-P-23377B.</p> <p style="margin-left: 40px;">B. APPLY TWO TOP COATS POLYURETHANE PER MIL-PRF-85285, TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595.</p>		
PREPARED BY DENISE S. BISHOP	SYMBOL LGMPM	DATE 26 FEB 02

REV:	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 68A412702-1001	NATIONAL STOCK NUMBER 1620-01-235-2927	
<p>24. INSTALL BUSHINGS PER THE FOLLOWING AS AN ALTERNATE TO PS 17034:</p> <p>A. THE BUSHING INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE I.D. OF THE HOUSING INTO WHICH THE BUSHING IS INSTALLED, OR THE FINISH OF THE O.D. OF THE BUSHING. FORCED INSTALLATION OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A PRESS OR HAMMER IS NOT PERMITTED, AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER MAY BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING.</p> <p>B. PRIOR TO BUSHING INSTALLATION, THE PARTS AND HOUSING BORE SHALL BE CLEANED WITH CLEANING SOLVENT TO REMOVE ALL CONTAMINATION.</p> <p>C. LIQUID NITROGEN SHALL BE USED FOR ALL SUB-ZERO INSTALLATIONS UNLESS SOME OTHER SUB-ZERO COOLANT IS SPECIFIED, AND APPROVED BY OO-ALC/LILEC ENGINEERING. THE SOAK TIME OF THE BUSHING IN THE LIQUID NITROGEN SHALL BE SUFFICIENT TO ALLOW THE BUSHING TO REACH THE SAME TEMPERATURE AS THE COOLANT.</p> <p>D. THE BUSHING SHALL BE INSTALLED INTO THE HOUSING IMMEDIATELY UPON REMOVAL FROM THE COOLANT WITH AN ABSOLUTE MINIMUM OF LOST TIME. TRIAL RUNS SHALL BE ACCOMPLISHED AS NECESSARY TO MINIMIZE INSTALLATION TIME WHICH SHOULD BE IN THE ORDER OF ABOUT SEVEN (7) SECONDS MAXIMUM.</p> <p>E. IT MAY OCCASIONALLY BE NECESSARY TO HEAT THE HOUSING INTO WHICH THE BUSHING IS TO BE INSTALLED, IN ADDITION TO SUB-ZERO COOLING OF THE BUSHING. DETAIL PARTS IN PROCESS, WHICH DO NOT HAVE PAINT OR SEALANT OR OTHER ORGANIC MATERIAL APPLIED PRIOR TO HEATING, THE PARTS SHALL BE HEATED BY THE USE OF RADIANT HEAT TECHNIQUES, SUCH AS THERMAL BLANKETS, INFRARED LAMPS ETC.; TO THE MAXIMUM TEMPERATURE OF 250 F. THE TEMPERATURE MEASURING DEVICES SHALL BE USED TO MONITOR HEAT AND SHALL BE LOCATED ON AREAS OF THE PART EXPECTED TO REACH MAXIMUM TEMPERATURE. NO SCALING, OXIDATION, OR CORROSION SHALL BE PERMITTED.</p> <p>F. BUSHINGS WITHOUT FLANGES SHALL BE INSTALLED INTO HOUSING BORE WHICH HAS RECEIVED A LIGHT COAT OF SEALANT PER MIL-S-81733. INSTALL SHRUNKEN BUSHING AND WIPE OFF ANY EXCESS SEALANT THAT MAY HAVE EXTRUDED AROUND THE PERIPHERY OF BOTH ENDS OF THE BUSHINGS.</p> <p>G. BUSHINGS WITH FLANGES SHALL BE INSTALLED IN A SIMILAR MANNER AS PARAGRAPH (F) EXCEPT SEALANT SHALL ALSO BE APPLIED TO FACE OR LUG UNDER FLANGE. SEALANT SHALL BE APPLIED IN SUCH A MANNER AS TO ENSURE COMPLETE COVERAGE OF INSIDE FACE OF BUSHING FLANGE WHEN BUSHING IS INSTALLED. WIPE OFF ANY EXCESS SEALANT AROUND PERIPHERY OF BUSHING FLANGE FORMING A BEAD. WIPE ANY EXCESS SEALANT FROM OTHER END OF BUSHING ALSO.</p> <p>H. FOR BUSHINGS WITH EXTERNAL GREASE GROOVES THE INSIDE OF THE LUG WILL BE COATED WITH MIL-C-16173 PRIOR TO BUSHING INSTALLATION AND FACE OF LUG WILL BE COATED WITH MIL-S-81733 PER PARAGRAPH G.</p>		
PREPARED BY DENISE S. BISHOP	SYMBOL LGMPM	DATE 26 FEB 02

REV:

ENGINEERING DATA REQUIREMENT CONTINUATION SHEET
(ATTACHMENT "A")

PART NUMBER

68A412702-1001

NATIONAL STOCK NUMBER

1620-01-235-2927

25. FORGING REQUIREMENT:

A. THE FORGING SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.

1. PRIOR TO CONTRACT AWARD, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION, FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PARTS BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.

2. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 (STEEL). THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.

26. FORGING SOURCE, CONTROL AND LOCATION OF DIES:

A. FORGING DRAWING: 68A412702 P/N 68A412702-2005

B. DIE NUMBER: 4895

C. CONTROL OF FORGING PROCESS: BOEING

D. LOCATION OF FORGING DIES: PARK DROP FORGE DIV.
777 E. 79TH STREET
CLEVELAND, OH. 44103
PHONE: (216) 431-2900

PREPARED BY

DENISE S. BISHOP

SYMBOL

LGMPM

DATE

26 Feb 02

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620012352927
NOUN: Cylinder assembly, MLG

PART NUMBER (P/N) 68A412702-1001
AIRCRAFT: F-15E

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 68A412702-1001 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620012352927

PART NUMBER (P/N) 68A412702-1001

NOUN: Cylinder assembly, MLG

AIRCRAFT: F-15E

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$5000.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF PISTON ASSEMBLY - NOSE LANDING GEAR		
2. PART NUMBER 68A452704-1003	3. NATIONAL STOCK NUMBER 1620-01-232-9310	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. MARKING AND IDENTIFICATION PER MIL-STD-130 IN LIEU OF PS 16001.		
6. PER DRAWING REQUIREMENTS, SERIAL NUMBER SHALL BE VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL) IN 0.09" LETTERS 0.004" - 0.007" DEEP IN THE LOCATION INDICATED. IF THE DRAWING DOES NOT INDICATE A LOCATION, OO-ALC/LILE SHALL PROVIDE S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION SHALL BEGIN WITH THE CAGE (FSCM) OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-02-001".		
7. PER DRAWING REQUIREMENTS, PERFORM FLUORESCENT PENETRANT INSPECTION PER ASTM E 1417, TYPE I, METHOD B OR C, LEVEL 3 AS AN ALTERNATE TO PS 21202 WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: <u>NO DEFECTS ALLOWED</u> . THE INTENT OF <u>NO DEFECTS ALLOWED</u> IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.		
8. PER DRAWING REQUIREMENTS, PERFORM MAGNETIC PARTICLE INSPECTION PER ASTM E 1444 AS AN ALTERNATE TO PS 21201. USE FULL WAVE DIRECT CURRENT (FWDC), WET CONTINUOUS METHOD, FLUORESCENT TYPE WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: <u>NO DEFECTS ALLOWED</u> . THE INTENT OF <u>NO DEFECTS ALLOWED</u> IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.		
9. PER DRAWING REQUIREMENTS, TEMPER ETCH INSPECT PER MIL-STD-867 AS AN ALTERNATE TO PS 21205.		
10. HEAT TREAT PER SAE AMS-H-6875 AS AN ALTERNATE TO PS 15296 OR PS 15351.		
PREPARED BY JOAN HYATT	SYMBOL LGMPM	DATE 28 Jun 02

PART NUMBER 68A452704-1003	NATIONAL STOCK NUMBER 1620-01-232-9310
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- 11. FOR PARTS HEAT-TREATED TO 180 KSI AND ABOVE, ANY SURFACE GROUND/MACHINED AFTER HEAT TREAT SHALL BE INSPECTED FOR ABUSIVE GRINDING/MACHINING BURNS PER MIL-STD-867 IN LIEU OF PS 1205. GRINDING SHALL BE PER MIL-STD-866 IN LIEU OF PS 20710.
- 12. SHOT PEEN PER SAE AMS- S-13165 AS AN ALTERNATE TO PS 14023.
- 13. CADMIUM PLATE PER MIL-STD-870 TYPE II CL 2 AS AN ALTERNATIVE TO PS 13144.
- 14. CHROME PLATE PER MIL-STD-1501 TYPE II CL 3 AS AN ALTERNATIVE TO PS 13102.
- 15. PER DRAWING REQUIREMENTS, PAINT AS FOLLOWS:

APPLY ONE COAT EPOXY WATERBORNE PRIMER PER MIL-PRF-85582 TYPE 1, CL 2. ALTERNATE ONE COAT OF EPOXY POLYAMIDE PRIMER PER MIL-PRF-23377 TYPE 1. APPLY TWO TOPCOATS POLYURETHANE PER MIL-PRF-85285 TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595 IN LIEU OF MIL-C-83286 WHICH HAS BEEN CANCELLED.
- 16. INTERPRET DRAWINGS PER MIL-STD-100 AS AN ALTERNATE TO 40M114.
- 17. PER DRAWINGS ST4M139 AND 4M139, MATERIAL PER SAE AMS 4640 IN LIEU OF AMS 4640.
- 18. PER DRAWINGS ST4M139 AND 4M139, CADMIUM PLATE PER SAE AMS QQ-P-416 TYPE II CL 2 IN LIEU OF QQ-P-416 TYPE II CL 2.
- 19. APPLY A THIN UNIFORM COATING OF PRIMER PER MIL-PRF-23377 OR MIL-PRF-85582 (AFTER CADMIUM PLATING FOR STEEL OR ANODIZING FOR ALUMINUM) TO ALL BUSHING BORES AND ALLOW TO FULLY CURE PRIOR TO INSTALLATION OF BUSHING (PRIMER SHALL NOT OBSTRUCT GREASE PASSAGES).
- 20. INSTALL BUSHINGS PER THE FOLLOWING AS AN ALTERNATE TO PS 17034:
 - A. THE BUSHING INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE I.D. OF THE HOUSING INTO WHICH THE BUSHING IS INSTALLED, OR THE FINISH OF THE O.D. OF THE BUSHING. FORCED INSTALLATION OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A PRESS OR HAMMER IS NOT PERMITTED, AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER MAY BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING.
 - B. PRIOR TO BUSHING INSTALLATION, THE PARTS AND HOUSING BORE SHALL BE CLEANED WITH A CLEANING SOLVENT TO REMOVE ALL CONTAMINATION.

PREPARED BY JOAN HYATT	SYMBOL LGMPM	DATE 28 JUNE 2002
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REV:	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER	NATIONAL STOCK NUMBER	
68A452704-1003	1620-01-232-9310	

C. LIQUID NITROGEN SHALL BE USED FOR ALL SUB-ZERO INSTALLATIONS UNLESS SOME OTHER SUB-ZERO COOLANT IS SPECIFIED, AND APPROVED BY OO-ALC/LILE ENGINEERING. THE SOAK TIME OF THE BUSHING IN THE LIQUID NITROGEN SHALL BE SUFFICIENT TO ALLOW THE BUSHING TO REACH THE SAME TEMPERATURE AS THE COOLANT.

D. THE BUSHING SHALL BE INSTALLED INTO THE HOUSING IMMEDIATELY UPON REMOVAL FROM THE COOLANT WITH AN ABSOLUTE MINIMUM OF LOST TIME. TRIAL RUNS SHALL BE ACCOMPLISHED AS NECESSARY TO MINIMIZE INSTALLATION TIME WHICH SHOULD BE IN THE ORDER OF ABOUT SEVEN (7) SECONDS MAXIMUM.

E. IT MAY OCCASIONALLY BE NECESSARY TO HEAT THE HOUSING INTO WHICH THE BUSHING IS TO BE INSTALLED, IN ADDITION TO SUB-ZERO COOLING OF THE BUSHING. DETAIL PARTS IN PROCESS, WILL NOT HAVE PAINT OR SEALANT OR OTHER ORGANIC MATERIAL APPLIED PRIOR TO HEATING, THE PARTS SHALL BE HEATED BY THE USE OF RADIANT HEAT TECHNIQUES, SUCH AS THERMAL BLANKETS, INFRARED LAMPS ETC.; TO THE MAXIMUM TEMPERATURE OF 250 F. TEMPERATURE MEASURING DEVICES SHALL BE USED TO MONITOR HEAT AND SHALL BE LOCATED ON AREAS OF THE PART EXPECTED TO REACH MAXIMUM TEMPERATURE. NO SCALING, OXIDATION, OR CORROSION SHALL BE PERMITTED.

F. BUSHINGS WITHOUT FLANGES SHALL BE INSTALLED INTO HOUSING BORE WHICH HAS RECEIVED A LIGHT COAT OF SEALANT PER MIL-PRF-81733. INSTALL SHRUNKEN BUSHING AND WIPE OFF ANY EXCESS SEALANT THAT MAY HAVE EXTRUDED AROUND THE PERIPHERY OF BOTH ENDS OF THE BUSHINGS.

G. BUSHINGS WITH FLANGES SHALL BE INSTALLED IN A SIMILAR MANNER AS PARAGRAPH (F) EXCEPT SEALANT SHALL ALSO BE APPLIED TO FACE OF LUG UNDER FLANGE. SEALANT SHALL BE APPLIED IN SUCH A MANNER AS TO ENSURE COMPLETE COVERAGE OF INSIDE FACE OF BUSHING FLANGE WHEN BUSHING IS INSTALLED. WIPE OFF ANY EXCESS SEALANT AROUND PERIPHERY OF BUSHING FLANGE. WIPE ANY EXCESS SEALANT FROM OTHER END OF BUSHING ALSO.

H. FOR BUSHINGS WITH EXTERNAL GREASE GROOVES, THE INSIDE OF THE LUG WILL BE COATED WITH MIL-C-16173 PRIOR TO BUSHING INSTALLATION AND FACE OF LUG WILL BE COATED WITH MIL-PRF-81733 PER PARAGRAPH G, IF BUSHING IS FLANGED.

21. THE FORGING SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.

A. PRIOR TO CONTRACT AWARD, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PARTS BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.

B. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 FOR STEEL FORGINGS. THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.

PREPARED BY	SYMBOL	DATE
JOAN HYATT	LGMPM	28 JUNE 2002

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 68A452704-1003	NATIONAL STOCK NUMBER 1620-01-232-9310	
<p>22. FORGING SOURCES, CONTROL AND LOCATION OF DIES:</p> <p>A. FORGING DRAWING: 68A452704-2001</p> <p>B. CONTROL OF FORGING PROCESS: KROPP FORGING</p> <p>C. FORGING DIE NUMBER: 7992</p> <p>D. LOCATION OF FORGING DIE:</p> <p>KROPP FORGE COMPANY A DIVISION OF PARK-OHIO 5301 W. ROOSEVELT ROAD CICERO, IL. 60650-1273 PHONE: (708) 652-6691 CAGE: 0BFN1</p> <p>23. IF FORGING SOURCE IS NOT IDENTIFIED PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL ADVISE THE GOVERNMENT IN WRITING OF THE INTENT TO PROCURE NEW FORGING DIES AND THE PROPOSED FORGING SOURCE. THE CONTRACTOR SHALL NOT PROCEED TO OBTAIN NEW FORGINGS DIES WITHOUT THE EXPRESS WRITTEN CONSENT OF THE GOVERNMENT-PROCURING ACTIVITY. THE GOVERNMENT SHALL HAVE UNLIMITED USE OF THE DIES DEVELOPED UNDER THIS CONTRACT. THE CONTRACTOR SHALL INFORM THE FORGING HOUSE IN WRITING, AT THE SAME TIME OF THE ORDER FOR THE DIES IS PLACED, THAT THE GOVERNMENT HAS UNLIMITED USE RIGHTS OF THE DIES AND FORWARD A COPY OF THIS LETTER TO THE GOVERNMENT CONTRACTING OFFICER.</p> <p>24. AFTER CONTRACT AWARD, THE SUCCESSFUL BIDDER SHALL PROVIDE A COPY OF THE PROCESSING DOCUMENTATION (ROUTING DOCUMENTS AND PROCESS SPECIFICATIONS) TO LILE FOR FINAL REVIEW BEFORE PRODUCTION BEGINS.</p> <p>25. OO-ALC/LILE SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT MRB'S PRIOR TO SHIPMENT OF DISCREPANT ITEM. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE WILL BE SUBMITTED FOR MRB DISPOSITION.</p> <p>26. PRIOR TO CONTRACT AWARD, THE CONTRACTOR WILL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENTS/ASSEMBLIES. THE CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE THESE COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO THIS OFFICE OO-ALC/LILE.</p>		
PREPARED BY JOAN HYATT	SYMBOL LGMPM	DATE 28 Jun 02

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620012329310
NOUN: Piston NLG

PART NUMBER (P/N) 68A452704-1003
AIRCRAFT: F-15E

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 68A452704-2001 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN)1620012329310
NOUN: Piston NLG

PART NUMBER (P/N)68A452704-1003
AIRCRAFT: F-15E

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$4000.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV:		ENGINEERING DATA REQUIREMENTS ATTACHMENT "A"	
NOTE: MILITARY SPECIFICATIONS/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.			
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF CYLINDER ASSEMBLY-MAIN LANDING GEAR			
2. PART NUMBER 68A412702-1002		3. NATIONAL STOCK NUMBER 1620-01-236-3518	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.			
5. OO-ALC/LILE SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT/REJECT MATERIAL REVIEW BOARD (MRB) DISPOSITIONS PRIOR TO SHIPMENT OF DISCREPANT ITEM. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE SHALL BE SUBMITTED FOR MRB DISPOSITION.			
6. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENT/ASSEMBLY. CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE LANDING GEAR COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO THE OFFICE OF OO-ALC/LILE.			
7. AFTER CONTRACT AWARD, THE SUCCESSFUL BIDDER SHALL PROVIDE A COPY OF THE PROCESSING DOCUMENTATION (ROUTING DOCUMENTS AND PROCESS SPECIFICATIONS) TO LILE FOR FINAL REVIEW BEFORE PRODUCTION BEGINS.			
8. IDENTIFICATION AND MARKING PER MIL-STD-130 AS AN ALTERNATE TO PS 16001.			
9. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: SERIAL NUMBER SHALL BE VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL), IN 0.09" LETTERS 0.004"-0.007" DEEP IN THE LOCATION INDICATED. IF THE DRAWING DOES NOT INDICATE A LOCATION, OO-ALC/LILE SHALL PROVIDE S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION SHALL BEGIN WITH THE CAGE (FSCM) OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-00-001.			
10. MATERIAL SPECIFICATIONS: 300M STEEL MATERIAL PER SAE AMS 6419 IN LIEU OF AMS 6419. 17-4PH MATERIAL PER SAE AMS 5643 IN LIEU OF AMS 5643. BERYLLIUM COPPER MATERIAL PER ASTM B 196 IN LIEU OF QQ-C-530.			
11. MATERIAL CLEANLINESS PER SAE AMS 2300 IN LIEU OF AMS 2300.			
12. SHOT PEEN PER SAE AMS-S-13165 MAY BE USED AS AN ALTERNATE TO PS 14023, BUT ALL REQUIREMENTS OF DRAWING 68A412702, NOTE 23 WILL BE ACCOMPLISHED WITH EXCEPTION NOTED ON DRAWING.			
PREPARED BY DAVID H. ARGYLE		SYMBOL LGMPM	DATE 19 MAR 02

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 68A412702-1002	NATIONAL STOCK NUMBER 1620-01-236-3518	
<p>13. TEMPER ETCH PER MIL-STD-867 AS AN ALTERNATE TO PS 21205</p> <p>14. INSPECTION PER SAE AMS-F-7190 AS AN ALTERNATE TO PS 23006.</p> <p>15. PASSIVATE PER SAE AMS-QQ-P-35, ASTM A967 AS AN ALTERNATE TO PS 13001.</p> <p>16. HEAT TREAT PER SAE AMS-H-7199 AS AN ALTERNATE TO PS 15935.</p> <p>17. HEAT TREAT PER SAE AMS-H-6875 AS AN ALTERNATE TO PS 15296, PS 15227 AND PS 15351 IN LIEU OF PS 15251 (NOTE 14, DG. 68412702).</p> <p>18. PARTS HEAT TREATED TO 180KSI AND ABOVE: ANY SURFACE GROUND/MACHINED AFTER HEAT, SHALL BE INSPECTED FOR ABUSIVE GRINDING/MACHINING BURNS PER MIL-STD-867. GRINDING SHALL BE PER MIL-STD-866.</p> <p>19. CADMIUM PLATE PER MIL-STD-870 TYPE II, CLASS 1 AS AN ALTERNATE TO PS 13444.</p> <p>20. CADMIUM PLATE PER MIL-STD-870 IN LIEU OF QQ-P-416.</p> <p>21. CHROMIUM PLATE PER MIL-STD-1501 TYPE I OR II, CLASS 2 AS AN ALTERNATE TO PS 13102.</p> <p>22. INSPECTION REQUIREMENTS ARE AS FOLLOWS:</p> <p>A. MAGNETIC PARTICLE INSPECTION PER ASTM E1444 IN LIEU OF PS 21201. FULL WAVE DIRECT CURRENT (FWDC), WET CONTINUOUS METHOD, FLUORESCENT TYPE WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED I NAS-410.</p> <p>B. FLUORESCENT PENETRANT INSPECTION PER ASTM E1417, TYPE I, METHOD B OR C LEVEL 3 OR 4 IN LIEU OF PS 21202 WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH HE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.</p> <p>23. FINISH SPECIFICATION 68A900000 WILL NOT BE FURNISHED. THE FOLLOWING FINISH MAY BE USED AS AN ALTERNATE TO PS 13646 (NOTE 31, DWG 68A412702):</p> <p>A. APPLY ONE COAT EPOXY WATERBORN PRIMER PER MIL-PRF-85582, TYPE I, CLASS 2. ALTERNATE ONE COAT OF EPOXY POLYIMIDE PRIMER PER MIL-PRF-23377, TYPE I IN LIEU OF MIL-P-23377B.</p> <p>B. APPLY TWO TOP COATS POLYURETHANE PER MIL-PRF-85285, TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595.</p>		
PREPARED BY DAVID H. ARGYLE	SYMBOL LGMPPM	DATE 19 MAR 02

REV:		ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER		NATIONAL STOCK NUMBER	
68A412702-1002		1620-01-236-3518	
<p>24. INSTALL BUSHINGS PER THE FOLLOWING AS AN ALTERNATE TO PS 17034:</p> <p>A. THE BUSHING INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE I.D. OF THE HOUSING INTO WHICH THE BUSHING IS INSTALLED, OR THE FINISH OF THE O.D. OF THE BUSHING. FORCED INSTALLATION OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A PRESS OR HAMMER IS NOT PERMITTED, AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER MAY BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING.</p> <p>B. PRIOR TO BUSHING INSTALLATION, THE PARTS AND HOUSING BORE SHALL BE CLEANED WITH CLEANING SOLVENT TO REMOVE ALL CONTAMINATION.</p> <p>C. LIQUID NITROGEN SHALL BE USED FOR ALL SUB-ZERO INSTALLATIONS UNLESS SOME OTHER SUB-ZERO COOLANT IS SPECIFIED, AND APPROVED BY OO-ALC/LILEC ENGINEERING. THE SOAK TIME OF THE BUSHING IN THE LIQUID NITROGEN SHALL BE SUFFICIENT TO ALLOW THE BUSHING TO REACH THE SAME TEMPERATURE AS THE COOLANT.</p> <p>D. THE BUSHING SHALL BE INSTALLED INTO THE HOUSING IMMEDIATELY UPON REMOVAL FROM THE COOLANT WITH AN ABSOLUTE MINIMUM OF LOST TIME. TRIAL RUNS SHALL BE ACCOMPLISHED AS NECESSARY TO MINIMIZE INSTALLATION TIME WHICH SHOULD BE IN THE ORDER OF ABOUT SEVEN (7) SECONDS MAXIMUM.</p> <p>E. IT MAY OCCASIONALLY BE NECESSARY TO HEAT THE HOUSING INTO WHICH THE BUSHING IS TO BE INSTALLED, IN ADDITION TO SUB-ZERO COOLING OF THE BUSHING. DETAIL PARTS IN PROCESS, WHICH DO NOT HAVE PAINT OR SEALANT OR OTHER ORGANIC MATERIAL APPLIED PRIOR TO HEATING, THE PARTS SHALL BE HEATED BY THE USE OF RADIANT HEAT TECHNIQUES, SUCH AS THERMAL BLANKETS, INFRARED LAMPS ETC.; TO THE MAXIMUM TEMPERATURE OF 250 F. THE TEMPERATURE MEASURING DEVICES SHALL BE USED TO MONITOR HEAT AND SHALL BE LOCATED ON AREAS OF THE PART EXPECTED TO REACH MAXIMUM TEMPERATURE. NO SCALING, OXIDATION, OR CORROSION SHALL BE PERMITTED.</p> <p>F. BUSHINGS WITHOUT FLANGES SHALL BE INSTALLED INTO HOUSING BORE WHICH HAS RECEIVED A LIGHT COAT OF SEALANT PER MIL-S-81733. INSTALL SHRUNKEN BUSHING AND WIPE OFF ANY EXCESS SEALANT THAT MAY HAVE EXTRUDED AROUND THE PERIPHERY OF BOTH ENDS OF THE BUSHINGS.</p> <p>G. BUSHINGS WITH FLANGES SHALL BE INSTALLED IN A SIMILAR MANNER AS PARAGRAPH (F) EXCEPT SEALANT SHALL ALSO BE APPLIED TO FACE OR LUG UNDER FLANGE. SEALANT SHALL BE APPLIED IN SUCH A MANNER AS TO ENSURE COMPLETE COVERAGE OF INSIDE FACE OF BUSHING FLANGE WHEN BUSHING IS INSTALLED. WIPE OFF ANY EXCESS SEALANT AROUND PERIPHERY OF BUSHING FLANGE FORMING A BEAD. WIPE ANY EXCESS SEALANT FROM OTHER END OF BUSHING ALSO.</p> <p>H. FOR BUSHINGS WITH EXTERNAL GREASE GROOVES THE INSIDE OF THE LUG WILL BE COATED WITH MIL-C-16173 PRIOR TO BUSHING INSTALLATION AND FACE OF LUG WILL BE COATED WITH MIL-S-81733 PER PARAGRAPH G.</p>			
PREPARED BY		SYMBOL	DATE
DAVID H. ARGYLE		LGMPPM	19 MAR 02

REV:

ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET
ATTACHMENT "A7"

PART NUMBER

68A412702-1002

NATIONAL STOCK NUMBER

1620-01-236-3518

25. FORGING REQUIREMENT:

A. THE FORGING SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.

1. PRIOR TO CONTRACT AWARD, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION, FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PARTS BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.

2. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 (STEEL). THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.

26. FORGING SOURCE, CONTROL AND LOCATION OF DIES:

A. FORGING DRAWING: 68A412702 P/N 68A412702-2006

B. DIE NUMBER: 4896

C. CONTROL OF FORGING PROCESS: BOEING

D. LOCATION OF FORGING DIES: PARK DROP FORGE DIV.
777 E. 79TH STREET
CLEVELAND, OH. 44103
PHONE: (216) 431-2900

27. DISREGARD NOTE 36 ON DWG. 68A412702.

PREPARED BY

DAVID H. ARGYLE

SYMBOL

LGMPM

DATE

19 MAR 02

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620012363518

PART NUMBER (P/N) 68A412702-1002

NOUN: Cylinder Assembly-Main Landing Gear

AIRCRAFT: F-15E

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 68A412702-1002 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620012363518

PART NUMBER (P/N) 68A412702-1002

NOUN: Cylinder Assembly-Main Landing Gear

AIRCRAFT: F-15E

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$5000.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REVISION: 07

* HISTORY *

[illegible]

STANDARD ENGINEERING TEXT

ENGINEERING DATA LIST REMARKS

FURNISHED METHOD CODE LEGEND:

C - CLASSIFIED DOCUMENT.

S - FURNISHED WITH SOLICITATION.

M - STABLE BASE DRAWING REQUIRED:

X - DATA SUPPLIED (NOT IN EDCARS). G - GOV'T DOCUMENT.

R - FURNISHED BY PCD UPON REQUEST. 0 - OTHERS. CONTRACTOR

P - PARTIAL DOCUMENT FURNISHED. MUST ACQUIRE OTHERS, CONTRACTOR MUST ACQUIRE

V - VENTRO PRAEVIUM.
MUST ACQUIRE.

REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS /STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF <div style="text-align: center; padding: 10px;">CYLINDER ASSY, INNER - SHOCK STRUT, NLG</div>		
2. PART NUMBER <div style="text-align: center; padding: 5px;">2007644-103</div>	3. NATIONAL STOCK NUMBER <div style="text-align: center; padding: 5px;">1620-01-259-0559</div>	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. MATL REF: 300M STEEL PER AMS 6414, AMS 6257, CLASS 3, IN LIEU OF MIL-S-8844, CLEANLINESS PER SAE AMS 2300 IN LIEU OF AMS 2300.		
6. HEAT TREAT PER SAE AMS-H-6875 IN LIEU OF MIL-H-6875.		
7. FOR PARTS HEAT-TREATED TO 180 KSI AND ABOVE, ANY SURFACE GROUND/MACHINED AFTER HEAT TREAT, SHALL BE INSPECTED FOR ABUSIVE GRINDING/MACHINING BURNS PER MIL-STD-867. GRINDING SHALL BE PER MIL-STD-866.		
8. PERFORM MAGNETIC PARTICLE INSPECTION PER ASTM E 1444 IN LIEU OF MIL-I-6868. USE FULL WAVE DIRECT CURRENT (FWDC), WET CONTINUOUS METHOD, FLUORESCENT TYPE WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.		
9. SHOT PEEN PER SAE AMS-S-13165 IN LIEU OF MIL-S-13165.		
10. CHROME PLATE TO DRAWING REQUIREMENTS PER SAE AMS-S-QQ-C-320 IN LIEU OF QQ-C-320.		
11. PAINT REQUIREMENTS AS FOLLOWS: <div style="margin-left: 20px; padding: 5px;"> A. APPLY ONE COAT EPOXY WATERBORNE PRIMER PER MIL-PRF-85582, TYPE I, CLASS 2. ALTERNATE ONE COAT OF EPOXY POLYAMIDE PRIMER PER MIL-PRF-23377, TYPE I IN LIEU OF MIL-P-23377. </div> <div style="margin-left: 20px; padding: 5px;"> B. APPLY TWO TOPCOATS POLYURETHANE PER MIL-PRF-85285, TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595, IN LIEU OF MIL-C-83286. </div>		
12. SPECIFICATION MM4951 CADMIUM PLATING WILL NOT BE FURNISHED AS IT IS LIMITED (PROPRIETARY) DATA. AS AN ALTERNATE USE SPEC MM5542, CADMIUM PLATING. (PROVIDED)		
13. CORROSION PROTECTION PER MIL-C-16173, GRADE 1 OR MIL-C-11796, CLASS 1 OR 2 IN LIEU OF MM5752.		
14. IDENTIFICATION AND MARKING PER MIL-STD-130 IN LIEU OF TM1040.		
15. PERFORM FLUORESCENT PENETRANT INSPECTION PER ASTM E 1417, TYPE I, METHOD B OR C, LEVEL 3 OR 4 IN LIEU OF MIL-I-6866 WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.		
PREPARED BY <div style="text-align: center; padding: 5px;">CAROL HYER</div>	SYMBOL <div style="text-align: center; padding: 5px;">LGMPM</div>	DATE <div style="text-align: center; padding: 5px;">5 Nov 02</div>

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 2007644-103	NATIONAL STOCK NUMBER 1620-01-259-0559	
<p>16. SERIAL NUMBER SHALL BE VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL), IN 0.09" LETTERS 0.004" - 0.007" DEEP IN THE LOCATION INDICATED. IF THE DRAWING DOES NOT INDICATE A LOCATION, OO-ALC/LGHLEN SHALL PROVIDE S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION SHALL BEGIN WITH THE CAGE OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-02-001".</p> <p>17. APPLY A THIN UNIFORM COATING OF PRIMER PER MIL-PRF-23377 OR MIL-PRF-85582 (AFTER CADMIUM PLATING) TO ALL BUSHING BORES AND ALLOW TO FULLY CURE, PRIOR TO INSTALLATION OF BUSHING (PRIMER SHALL NOT OBSTRUCT GREASE PASSAGES).</p> <p>18. PER DRAWING 2006404-247, USE MATERIAL SAE AMS 4640 IN LIEU OF AMS 4640.</p> <p>19 CADMIUM PLATE TO DRAWING SPECIFICATION PER SAE AMS-QQ-P-416 IN LIEU OF QQ-P-416.</p> <p>20. PER DRAWING 2007644, FLAGNOTE 36 IS NO LONGER APPLICABLE AS NO HAND FORGINGS CAN BE USED.</p> <p>21. PER DRAWING 2007404-81, USE MATERIAL ASTM B196, ASTM B197, ASTM B194 IN LIEU OF QQ-C-530.</p> <p>22. OO-ALC/LGHLEN SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT MATERIAL REVIEW BOARD (MRB'S) DISPOSITIONS PRIOR TO SHIPMENT OF DISCREPANT ITEM. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE SHALL BE SUBMITTED FOR MRB DISPOSITION.</p> <p>23. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENT/ASSEMBLY. CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE LANDING GEAR COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO OO-ALC/LGHLEN.</p> <p>24. AFTER CONTRACT AWARD, THE SUCCESSFUL BIDDER SHALL PROVIDE A COPY OF THE PROCESSING DOCUMENTATION (ROUTING DOCUMENTS AND PROCESS SPECIFICATIONS) TO LGHLEN FOR FINAL REVIEW BEFORE PRODUCTION BEGINS.</p> <p>25. THE FORGING SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.</p> <p>A. PRIOR TO CONTRACT AWARD, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION, FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PARTS BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.</p>		
PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 5 Nov 02

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 2007644-103	NATIONAL STOCK NUMBER 1620-01-259-0559	
<p>B. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 FOR STEEL FORGINGS AND SAE AMS-A-22771 FOR ALUMINUM FORGINGS. THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.</p> <p>26. FORGING SOURCE, CONTROL OF FORGING DIES, AND THE LOCATION OF DIES:</p> <p style="margin-left: 40px;">A. FORGING DRAWING: 2007744</p> <p style="margin-left: 40px;">B. CONTROL OF DRAWING PROCESS: GOODRICH</p> <p style="margin-left: 40px;">C. LOCATION OF FORGING DIES:</p> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 45%;"> <p>W. PAT CROW INC 200 LUXTON STREET P.O. BOX 1720 FT. WORTH, TX 76101-1720 (817) 536-2861 CAGE: 94790 DIE # 3738</p> </div> <div style="width: 45%;"> <p>SIFCO IND INC SIFCO FORGE GROUP 970 E 64TH STR CLEVELAND, OH 44103 (216) 881-8600 DIE # 10975</p> </div> </div> <div style="margin-top: 20px;"> <p>KROPP FORGE CO A DIVISION OF ANADITE, INC 5301 W. ROOSEVELT RD CHICAGO, IL 60650 (312) 242-1900 DIE # 7860</p> </div>		
<p>27. INSTALL BUSHINGS PER THE FOLLOWING IN LIEU OF MM5743:</p> <p style="margin-left: 40px;">A. THE BUSHING INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE I.D. OF THE HOUSING INTO WHICH THE BUSHING IS INSTALLED, OR THE FINISH OF THE O.D. OF THE BUSHING. FORCED INSTALLATION OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A PRESS OR HAMMER IS NOT PERMITTED. AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER MAY BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING.</p> <p style="margin-left: 40px;">B. PRIOR TO BUSHING INSTALLATION, THE PARTS AND HOUSING BORE SHALL BE CLEANED WITH A CLEANING SOLVENT TO REMOVE ALL CONTAMINATION.</p> <p style="margin-left: 40px;">C. LIQUID NITROGEN SHALL BE USED FOR ALL SUB-ZERO INSTALLATIONS UNLESS SOME OTHER SUB-ZERO COOLANT IS SPECIFIED, AND APPROVED BY OO-ALC/LILEC ENGINEERING. THE SOAK TIME OF THE BUSHING IN THE LIQUID NITROGEN SHALL BE SUFFICIENT TO ALLOW THE BUSHING TO REACH THE SAME TEMPERATURE AS THE COOLANT.</p>		
PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 5 Nov 02

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 2007644-103	NATIONAL STOCK NUMBER 1620-01-259-0559	
<p>D. THE BUSHING SHALL BE INSTALLED INTO THE HOUSING IMMEDIATELY UPON REMOVAL FROM THE COOLANT WITH AN ABSOLUTE MINIMUM OF LOST TIME. TRIAL RUNS SHALL BE ACCOMPLISHED AS NECESSARY TO MINIMIZE INSTALLATION TIME WHICH SHOULD BE IN THE ORDER OF ABOUT SEVEN (7) SECONDS MAXIMUM.</p> <p>E. IT MAY OCCASIONALLY BE NECESSARY TO HEAT THE HOUSING INTO WHICH THE BUSHING IS TO BE INSTALLED, IN ADDITION TO SUB-ZERO COOLING OF THE BUSHING. DETAIL PARTS IN PROCESS WILL NOT HAVE PAINT OR SEALANT OR OTHER ORGANIC MATERIAL APPLIED PRIOR TO HEATING, THE PARTS SHALL BE HEATED BY THE USE OF RADIANT HEAT TECHNIQUES, SUCH AS THERMAL BLANKETS, INFRARED LAMPS ETC.; TO THE MAXIMUM TEMPERATURE OF 250 F. TEMPERATURE MEASURING DEVICES SHALL BE USED TO MONITOR HEAT AND SHALL BE LOCATED ON AREAS OF THE PART EXPECTED TO REACH MAXIMUM TEMPERATURE. NO SCALING, OXIDATION, OR CORROSION SHALL BE PERMITTED.</p> <p>F. BUSHINGS WITHOUT FLANGES SHALL BE INSTALLED INTO HOUSING BORE WHICH HAS RECEIVED A LIGHT COAT OF SEALANT PER MIL-PRF-81733. INSTALL SHRUNKEN BUSHING AND WIPE OFF ANY EXCESS SEALANT THAT MAY HAVE EXTRUDED AROUND THE PERIPHERY OF BOTH ENDS OF THE BUSHINGS.</p> <p>G. BUSHINGS WITH FLANGES SHALL BE INSTALLED IN A SIMILAR MANNER AS PARAGRAPH (F) EXCEPT SEALANT SHALL ALSO BE APPLIED TO FACE OF LUG UNDER FLANGE. SEALANT SHALL BE APPLIED IN SUCH A MANNER AS TO ENSURE COMPLETE COVERAGE OF INSIDE FACE OF BUSHING FLANGE WHEN BUSHING IS INSTALLED. WIPE OFF ANY EXCESS SEALANT AROUND PERIPHERY OF BUSHING FLANGE. WIPE ANY EXCESS SEALANT FROM OTHER END OF BUSHING ALSO.</p> <p>H. FOR BUSHINGS WITH EXTERNAL GREASE GROOVES THE INSIDE OF THE LUG WILL BE COATED WITH MIL-C-16173 PRIOR TO BUSHING INSTALLATION AND FACE OF LUG WILL BE COATED WITH MIL-PRF-81733 PER PARAGRAPH G, IF BUSHING IS FLANGED.</p>		
PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 5 Nov 02

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-259-0559
NOUN: Cylinder Assy

PART NUMBER (P/N)2007644-103
AIRCRAFT: F-16

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 2007644-103 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-259-0559
NOUN: Cylinder Assy

PART NUMBER (P/N)2007644-103
AIRCRAFT: F-16

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$2000.00.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF <div style="text-align: center; padding: 10px;"> PISTON ASSY, OUTER - SHOCK STRUT, MLG </div>		
2. PART NUMBER <div style="text-align: center; padding: 5px;">2007106-103</div>	3. NATIONAL STOCK NUMBER <div style="text-align: center; padding: 5px;">1620-01-253-1350</div>	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. PER FLAG NOTE 1, DRAWING 2007106 AND FLAG NOTE 4, DRAWING 2007256 USE SAE AMS 6257 IN LIEU OF MIL-S-8844.		
6. HEAT TREAT PER SAE AMS-H-6875, MM4990 IN LIEU OF MIL-H-6875.		
7. FOR PARTS HEAT-TREATED TO 180 KSI AND ABOVE, ANY SURFACE GROUND/MACHINED AFTER HEAT TREAT, SHALL BE INSPECTED FOR ABUSIVE GRINDING/MACHINING BURNS PER MIL-STD-865. GRINDING SHALL BE PER MIL-STD-866 IN LIEU OF MM5759.		
8. PERFORM MAGNETIC PARTICLE INSPECTION PER ASTM E 1444 IN LIEU OF MIL-I-6868. USE FULL WAVE DIRECT CURRENT (FWDC), WET CONTINUOUS METHOD, FLUORESCENT TYPE WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED . THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN AIA/NAS NAS-410.		
9. SHOT PEEN PER SAE AMS-S-13165 IN LIEU OF MIL-S-13165.		
10. SPECIFICATION MM4951 CADMIUM PLATING WILL NOT BE FURNISHED AS IT IS LIMITED (PROPRIETARY) DATA. AS AN ALTERNATE USE SPECIFICATION MM5542, CADMIUM PLATING. (PROVIDED)		
11. DIMENSIONING AND TOLERANCING PER ASME Y14.5 IN LIEU OF ANSI Y14.5.		
12. SERIAL NUMBER SHALL BE VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL), IN 0.09" LETTERS 0.004" - 0.007" DEEP IN THE LOCATION INDICATED. IF THE DRAWING DOES NOT INDICATE A LOCATION, OO-ALC/LGHLEN SHALL PROVIDE S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION SHALL BEGIN WITH THE CAGE OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-03-001".		
13. CORROSION PROTECTION PER MIL-C-16173 GRADE 1 OR MIL-C-11796 CLASS 1 OR 2 IN LIEU OF MM5752.		
14. IDENTIFICATION AND MARKING PER MIL-STD-130 IN LIEU OF TM1040.		
15. SURFACE TEXTURE PER ASME B46.1 IN LIEU OF ASA B46.1.		
16. CHROME PLATE TO DRAWING REQUIREMENTS AND SAE AMS-QQ-C-320 IN LIEU OF QQ-C-320.		
PREPARED BY <div style="text-align: center; padding: 5px;">CAROL HYER</div>	SYMBOL <div style="text-align: center; padding: 5px;">LGMPM</div>	DATE <div style="text-align: center; padding: 5px;">24 APR 03</div>

REV:	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 2007106-103	NATIONAL STOCK NUMBER 1620-01-253-1350	
<p>17. APPLY A THIN UNIFORM COATING OF PRIMER PER MIL-PRF-23377 OR MIL-PRF-85582 (AFTER CADMIUM PLATING) TO ALL BUSHING BORES AND ALLOW TO FULLY CURE PRIOR TO INSTALLATION OF BUSHING (PRIMER SHALL NOT OBSTRUCT GREASE PASSAGES).</p> <p>18. INSTALL BUSHINGS PER THE FOLLOWING IN LIEU OF MM5743:</p> <p style="margin-left: 40px;">A. THE BUSHING INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE I.D. OF THE HOUSING INTO WHICH THE BUSHING IS INSTALLED, OR THE FINISH OF THE O.D. OF THE BUSHING. FORCED INSTALLATION OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A PRESS OR HAMMER IS NOT PERMITTED, AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER MAY BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING.</p> <p style="margin-left: 40px;">B. PRIOR TO BUSHING INSTALLATION, THE PARTS AND HOUSING BORE SHALL BE CLEANED WITH A CLEANING SOLVENT TO REMOVE ALL CONTAMINATION.</p> <p style="margin-left: 40px;">C. LIQUID NITROGEN SHALL BE USED FOR ALL SUB-ZERO INSTALLATIONS UNLESS SOME OTHER SUB-ZERO COOLANT IS SPECIFIED, AND APPROVED BY OO-ALC/LILEC ENGINEERING. THE SOAK TIME OF THE BUSHING IN THE LIQUID NITROGEN SHALL BE SUFFICIENT TO ALLOW THE BUSHING TO REACH THE SAME TEMPERATURE AS THE COOLANT.</p> <p style="margin-left: 40px;">D. THE BUSHING SHALL BE INSTALLED INTO THE HOUSING IMMEDIATELY UPON REMOVAL FROM THE COOLANT WITH AN ABSOLUTE MINIMUM OF LOST TIME. TRIAL RUNS SHALL BE ACCOMPLISHED AS NECESSARY TO MINIMIZE INSTALLATION TIME WHICH SHOULD BE IN THE ORDER OF ABOUT SEVEN (7) SECONDS MAXIMUM.</p> <p style="margin-left: 40px;">E. IT MAY OCCASIONALLY BE NECESSARY TO HEAT THE HOUSING INTO WHICH THE BUSHING IS TO BE INSTALLED, IN ADDITION TO SUB-ZERO COOLING OF THE BUSHING. DETAIL PARTS IN PROCESS WILL NOT HAVE PAINT OR SEALANT OR OTHER ORGANIC MATERIAL APPLIED PRIOR TO HEATING, THE PARTS SHALL BE HEATED BY THE USE OF RADIANT HEAT TECHNIQUES, SUCH AS THERMAL BLANKETS, INFRARED LAMPS ETC.; TO THE MAXIMUM TEMPERATURE OF 250 F. TEMPERATURE MEASURING DEVICES SHALL BE USED TO MONITOR HEAT AND SHALL BE LOCATED ON AREAS OF THE PART EXPECTED TO REACH MAXIMUM TEMPERATURE. NO SCALING, OXIDATION, OR CORROSION SHALL BE PERMITTED.</p> <p style="margin-left: 40px;">F. BUSHINGS WITHOUT FLANGES SHALL BE INSTALLED INTO HOUSING BORE WHICH HAS RECEIVED A LIGHT COAT OF SEALANT PER MIL-PRF-81733. INSTALL SHRUNKEN BUSHING AND WIPE OFF ANY EXCESS SEALANT THAT MAY HAVE EXTRUDED AROUND THE PERIPHERY OF BOTH ENDS OF THE BUSHINGS.</p> <p style="margin-left: 40px;">G. BUSHINGS WITH FLANGES SHALL BE INSTALLED IN A SIMILAR MANNER AS PARAGRAPH (F) EXCEPT SEALANT SHALL ALSO BE APPLIED TO FACE OF LUG UNDER FLANGE. SEALANT SHALL BE APPLIED IN SUCH A MANNER AS TO ENSURE COMPLETE COVERAGE OF INSIDE FACE OF BUSHING FLANGE WHEN BUSHING IS INSTALLED. WIPE OFF ANY EXCESS SEALANT AROUND PERIPHERY OF BUSHING FLANGE. WIPE ANY EXCESS SEALANT FROM OTHER END OF BUSHING ALSO.</p> <p style="margin-left: 40px;">H. FOR BUSHINGS WITH EXTERNAL GREASE GROOVES THE INSIDE OF THE LUG WILL BE COATED WITH MIL-C-16173 PRIOR TO BUSHING INSTALLATION AND FACE OF LUG WILL BE COATED WITH MIL-PRF-81733 PER PARAGRAPH G, IF BUSHING IS FLANGED.</p>		
PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 24 Apr 03

PART NUMBER 2007106-103	NATIONAL STOCK NUMBER 1620-01-253-1350
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19. PAINT REQUIREMENTS AS FOLLOWS:

A. APPLY ONE COAT EPOXY WATERBORNE PRIMER PER MIL-PRF-85582, TYPE I, CLASS 2. ALTERNATE ONE COAT OF EPOXY POLYAMIDE PRIMER PER MIL-PRF-23377, TYPE I IN LIEU OF MIL-P-23377.

B. APPLY TWO TOPCOATS POLYURETHANE PER MIL-PRF-85285, TYPE I, COLOR NUMBER 17925 (WHITE) PE FED-STD-595 IN LIEU OF MIL-C-83286.

20. PERFORM FLUORESCENT PENETRANT INSPECTION PER ASTM E1417, TYPE I, METHOD B OR C, LEVEL 3 OR 4, IN LIEU OF MIL-I-6866, WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN AIA/NAS NAS-410.

21. CADMIUM PLATE TO DRAWING REQUIREMENTS AND SAE AMS-QQ-P-416 IN LIEU OF QQ-P-416.

22. PER DRAWING 2006404-263 USE MATERIAL SAE AMS 4640 IN LIEU OF AMS 4640.

23. CLEANLINESS PER SAE AMS 2300 IN LIEU OF AMS 2300.

24. OO-ALC/LGHLEN SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT MATERIAL REVIEW BOARD (MRB'S) DISPOSITIONS PRIOR TO SHIPMENT OF DISCREPANT ITEM. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE SHALL BE SUBMITTED FOR MRB DISPOSITION.

25. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENT/ASSEMBLY. CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE LANDING GEAR COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO OO-ALC/LGHLEN.

26. THE REQUIRED FORGING WILL BE PROCURED FROM THE QUALIFIED FORGING SOURCE USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.

A. PRIOR TO CONTRACT AWARD, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION, FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PART BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.

B. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 FOR STEEL FORGINGS AND SAE AMS-A-22771 FOR ALUMINUM FORGINGS. THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.

PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 24 Apr 03
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REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 2007106-103		NATIONAL STOCK NUMBER 1620-01-253-1350
27. FORGING SOURCE, CONTROL AND LOCATION OF DIES: A. FORGING DRAWING: 2007256-1 B. CONTROL OF FORGING PROCESS: USAF C. LOCATION OF FORGING DIES: SIFCO IND., INC. SIFCO FORGE GROUP 970 EAST 64TH STR CLEVELAND, OH 44103-1620 PHONE: 216-881-8600 POC: MARILYN IRVINE DIE # 10823 W. PAT CROW, INC 200 LUXTON STR P.O. BOX 1720 FT. WORTH, TX 76101-1720 PHONE: 817-536-2861 X280 POC: LAURA RIVERA DIE # 3735		
PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 24 Apr 03

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-253-1350
NOUN: Outer Shock Strut - Piston Assy

PART NUMBER (P/N)2007106-103
AIRCRAFT:F-16

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 2007106-103 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-253-1350
NOUN: Outer Shock Strut - Piston Assy

PART NUMBER (P/N)2007106-103
AIRCRAFT: F-16

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$2000.00.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

- c. This waiver will be granted if and only if the design control authority (LGHLEN) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHLEN reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS /STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF <div style="text-align: center; padding: 10px;"> PISTON ASSY, INNER - MLG SHOCK STRUT </div>		
2. PART NUMBER <div style="text-align: center; padding: 5px;">2007101-103</div>	3. NATIONAL STOCK NUMBER <div style="text-align: center; padding: 5px;">1620-01-252-3344</div>	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. PER DRAWING 2007101 AND 2007251, USE MATERIAL AMS 6414, AMS 6257 IN LIEU OF MIL-S-8844.		
6. HEAT TREAT PER SAE AMS-H-6875 IN LIEU OF MIL-H-6875.		
7. FOR PARTS HEAT TREATED TO 180 KSI AND ABOVE, ANY SURFACE GROUND/MACHINED AFTER HEAT TREAT, SHALL BE INSPECTED FOR ABUSIVE GRINDING/MACHINING BURNS PER MIL-STD-867. GRINDING SHALL BE PER MIL-STD-866 OR MM5759.		
8. SHOT PEEN PER SAE AMS-S-13165 IN LIEU OF MIL-S-13165.		
9. SPECIFICATION MM4951 CADMIUM PLATING WILL NOT BE FURNISHED AS IT IS LIMITED (PROPRIETARY) DATA. AS AN ALTERNATE USE SPEC MM5542, CADMIUM PLATING. (PROVIDED)		
10. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION WILL BEGIN WITH THE CAGE OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS WILL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-03-001".		
11. PERFORM MAGNETIC PARTICLE INSPECTION PER ASTM E 1444, IN LIEU OF MIL-I-6868. USE FULL WAVE DIRECT CURRENT (FWDC), AND WET CONTINUOUS METHOD, FLUORESCENT TYPE WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED . THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN AIA/NAS NAS-410.		
12. PAINT ALL SURFACES EXCEPT AS NOTED ON DRAWING, PER THE FOLLOWING: <div style="margin-left: 20px; padding-left: 20px;"> A. APPLY ONE COAT EPOXY WATERBORNE PRIMER PER MIL-PRF-85582, TYPE I, CLASS 2. ALTERNATE ONE COAT OF EPOXY POLYAMIDE PRIMER PER MIL-PRF-23377, TYPE I IN LIEU OF MIL-P-23377. B. APPLY TWO TOPCOATS POLYURETHANE PER MIL-PRF-85285, TYPE I, COLOR #17925 (WHITE) PER FED-STD-595 IN LIEU OF MIL-C-83286. </div>		
13. CORROSION PROTECTION PER MIL-C-16173 GRADE 1, MIL-C-11796 CLASS 1 OR 2 OR MM5752.		
14. IDENTIFICATION AND MARKING PER MIL-STD-130 OR TM1040.		
15. PER DRAWING 2007102, USE MATERIAL ASTM B196 IN LIEU OF QQ-C-530.		
16. DIMENSIONS AND TOLERANCING PER ASME Y14.5 IN LIEU OF ANSI Y14.5.		
PREPARED BY <div style="text-align: center; padding: 5px;">CAROL HYER</div>	SYMBOL <div style="text-align: center; padding: 5px;">LGMPM</div>	DATE <div style="text-align: center; padding: 5px;">18 Mar 03</div>

PART NUMBER 2007101-103	NATIONAL STOCK NUMBER 1620-01-252-3344
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17. SURFACE TEXTURE PER ASME B46.1 IN LIEU OF ASA B46.1.
18. PER DRAWING 2007251, CLEANLINESS PER SAE AMS 2300 IN LIEU OF AMS 2300.
19. CHROME PLATE TO DRAWING REQUIREMENTS AND SAE AMS-QQ-C-320 IN LIEU OF QQ-C-320.
20. PERFORM FLUORESCENT PENETRANT INSPECTION PER ASTM E 1417, TYPE I, METHOD B OR C, LEVEL 3 OR 4 IN LIEU OF MIL-I-6866, WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: **NO DEFECTS ALLOWED.** THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN AIA/NAS NAS-410.
21. THE REQUIRED FORGING WILL BE PROCURED FROM THE QUALIFIED FORGING SOURCE USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.
- A. PRIOR TO CONTRACT AWARD THE DETAIL PART BIDDER WILL PROVIDE CERTIFICATION, FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND FORGING PROCEDURES ARE AVAILABLE AND THAT THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PART BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.
- B. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION WILL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND MIL-F-7190. THE CONTRACTOR WILL ASSURE THAT THIS IS OR HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND WILL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.
22. FORGING SOURCE, CONTROL AND LOCATION OF DIES:
- A. FORGING DRAWING: 2007251-1
- B. CONTROL OF FORGING PROCESS: UNKNOWN
- C. LOCATION OF FORGING DIES:
- | | |
|---|---|
| CANTON DROP FORGE
4575 SOUTHWAY ST. SW
P.O. BOX 6902
CANTON, OH 44706-0902
POC: JOHN MOTSA
330-477-4511
DIE # 6422 | W. PAT CROW FORGINGS, INC
P.O. BOX 1720
FORT WORTH, TX 76101-1720
817-536-2861
POC: HELEN BILLINGS
DIE # 3729 |
|---|---|

PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 18 Mar 03
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REV:

ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET
(ATTACHMENT "A")

PART NUMBER

2007101-103

NATIONAL STOCK NUMBER

1620-01-252-3344

23. OO-ALC/LGHLEN SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT MATERIAL REVIEW BOARD'S (MRB'S) DISPOSITIONS PRIOR TO SHIPMENT OF DISCREPANT ITEM. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE SHALL BE SUBMITTED FOR MRB DISPOSITION.

24. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENT/ASSEMBLY. CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE LANDING GEAR COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO OO-ALC/LGHLEN.

25. AFTER CONTRACT AWARD, THE SUCCESSFUL BIDDER SHALL PROVIDE A COPY OF THE PROCESSING DOCUMENTATION (ROUTING DOCUMENTS AND PROCESS SPECIFICATIONS) TO LGHLEN FOR FINAL REVIEW BEFORE PRODUCTION BEGINS.

PREPARED BY

CAROL HYER

SYMBOL

LGMPM

DATE

18 Mar 03

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-01-252-3344
NOUN: Piston Landing Gear MLG

PART NUMBER (P/N) 2007101-103
AIRCRAFT: F-16

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 2007101-103 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-01-252-3344
NOUN: Piston Landing Gear MLG

PART NUMBER (P/N) 2007101-103
AIRCRAFT: F-16

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$1000.00.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LGHLEN) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHLEN reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS /STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF <div style="text-align: center; padding: 10px;"> PISTON ASSY, OUTER - SHOCK STRUT, MLG </div>		
2. PART NUMBER <div style="text-align: center; padding: 10px;">2006106-109</div>	3. NATIONAL STOCK NUMBER <div style="text-align: center; padding: 10px;">1620-01-442-0167</div>	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. MATERIAL REF: 7049-T73 AL ALLOY PER SAE AMS-QQ-A-367 IN LIEU OF QQ-A-367. (REF DWG 2006106)		
6. PERFORM FLUORESCENT PENETRANT INSPECTION PER ASTM E 1417, TYPE I, METHOD B OR C, LEVEL 3 OR 4 IN LIEU OF MIL-I-6866, WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.		
7. SHOT PEEN PER SAE AMS-S-13165 IN LIEU OF MIL-S-13165.		
8. CORROSION PROTECTION PER MIL-C-16173 GRADE 2 OR MIL-C-11796 CLASS 3 IN LIEU OF MM5752.		
9. IDENTIFICATION AND MARKING PER MIL-STD-130 IN LIEU OF TM1040.		
10. ULTRASONIC INSPECTION PER MIL-STD-2154 TYPE I, CLASS A IN LIEU OF MIL-I-8950, CLASS A.		
11. PAINT PER DRAWING REQUIREMENTS AS FOLLOWS: <div style="margin-left: 20px; padding: 10px;"> A. APPLY ONE COAT EPOXY WATERBORNE PRIMER PER MIL-PRF-85582, TYPE I, CLASS 2 IN LIEU OF MIL-P-23377. ALTERNATE ONE COAT OF EPOXY POLYAMIDE PRIMER PER MIL-PRF-23377, TYPE I. B. APPLY TWO TOPCOATS POLYURETHANE PER MIL-PRF-85285, TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595, IN LIEU OF MIL-C-83286, WHICH HAS BEEN CANCELLED. </div>		
12. SERIAL NUMBER SHALL BE VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL), IN 0.09" LETTERS 0.004" - 0.007" DEEP IN THE LOCATION INDICATED. IF THE DRAWING DOES NOT INDICATE A LOCATION, OO-ALC/LGHLEN SHALL PROVIDE S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION SHALL BEGIN WITH THE CAGE (FSCM) OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-02-001".		
13. MATL: AL BRONZE PER SAE AMS 4640 IN LIEU OF AMS 4640. (REF DWG 2006404-263)		
14. CADMIUM PLATE PER SAE AMS-QQ-P-416 IN LIEU OF QQ-P-416.		
15. MATL: 17-4PH CRES, COND H1150, PER SAE AMS 5643 IN LIEU OF AMS 5643. (REF DWG 2006404-265)		
PREPARED BY <div style="text-align: center; padding: 10px;">CAROL HYER</div>	SYMBOL <div style="text-align: center; padding: 10px;">LGMPM</div>	DATE <div style="text-align: center; padding: 10px;">5 Nov 02</div>

REV:	ENGINEERING DATA REQUIREMENT (ATTACHMENT "A")		CONTINUATION SHEET
PART NUMBER 2006106-109	NATIONAL STOCK NUMBER 1620-01-442-0167		
<p>16. ADDITIONAL INFORMATION PER LILE ENGINEER - HARD ANODIZE 3.370/3.369 INCH DIAMETER BORE (ZONE A-5) PER MIL-A-8625 TYPE III, CLASS 1 IN LIEU OF FLAGNOTE #5 (CONVENTIONAL ANODIZE). FLAGNOTE #4 SHALL APPLY PRIOR TO HARD ANODIZE COATING AND FINISH DIAMETER SHALL BE 3.370/3.368 INCHES AFTER HARD ANODIZE WITH A 32 RMS FINISH.</p> <p>17. INSTALL BUSHINGS PER THE FOLLOWING IN LIEU OF MM5743 TYPE III & IV:</p> <p style="margin-left: 40px;">A. THE BUSHING INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE I.D. OF THE HOUSING INTO WHICH THE BUSHING IS INSTALLED, OR THE FINISH OF THE O.D. OF THE BUSHING. FORCED INSTALLATION OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A PRESS OR HAMMER IS NOT PERMITTED, AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER MAY BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING.</p> <p style="margin-left: 40px;">B. PRIOR TO BUSHING INSTALLATION, THE PARTS AND HOUSING BORE SHALL BE CLEANED WITH A CLEANING SOLVENT TO REMOVE ALL CONTAMINATION.</p> <p style="margin-left: 40px;">C. LIQUID NITROGEN SHALL BE USED FOR ALL SUB-ZERO INSTALLATIONS UNLESS SOME OTHER SUB-ZERO COOLANT IS SPECIFIED, AND APPROVED BY OO-ALC/LGHLEN ENGINEERING. THE SOAK TIME OF THE BUSHING IN THE LIQUID NITROGEN SHALL BE SUFFICIENT TO ALLOW THE BUSHING TO REACH THE SAME TEMPERATURE AS THE COOLANT.</p> <p style="margin-left: 40px;">D. THE BUSHING SHALL BE INSTALLED INTO THE HOUSING IMMEDIATELY UPON REMOVAL FROM THE COOLANT WITH AN ABSOLUTE MINIMUM OF LOST TIME. TRIAL RUNS SHALL BE ACCOMPLISHED AS NECESSARY TO MINIMIZE INSTALLATION TIME WHICH SHOULD BE IN THE ORDER OF ABOUT SEVEN (7) SECONDS MAXIMUM.</p> <p style="margin-left: 40px;">E. IT MAY OCCASIONALLY BE NECESSARY TO HEAT THE HOUSING INTO WHICH THE BUSHING IS TO BE INSTALLED, IN ADDITION TO SUB-ZERO COOLING OF THE BUSHING. DETAIL PARTS IN PROCESS WILL NOT HAVE PAINT OR SEALANT OR OTHER ORGANIC MATERIAL APPLIED PRIOR TO HEATING, THE PARTS SHALL BE HEATED BY THE USE OF RADIANT HEAT TECHNIQUES, SUCH AS THERMAL BLANKETS, INFRARED LAMPS ETC.; TO THE MAXIMUM TEMPERATURE OF 250 F. TEMPERATURE MEASURING DEVICES SHALL BE USED TO MONITOR HEAT AND SHALL BE LOCATED ON AREAS OF THE PART EXPECTED TO REACH MAXIMUM TEMPERATURE. NO SCALING, OXIDATION, OR CORROSION SHALL BE PERMITTED.</p> <p style="margin-left: 40px;">F. BUSHINGS WITHOUT FLANGES SHALL BE INSTALLED INTO HOUSING BORE WHICH HAS RECEIVED A LIGHT COAT OF SEALANT PER MIL-PRF-81733. INSTALL SHRUNKEN BUSHING AND WIPE OFF ANY EXCESS SEALANT THAT MAY HAVE EXTRUDED AROUND THE PERIPHERY OF BOTH ENDS OF THE BUSHINGS.</p> <p style="margin-left: 40px;">G. BUSHINGS WITH FLANGES SHALL BE INSTALLED IN A SIMILAR MANNER AS PARAGRAPH (F) EXCEPT SEALANT SHALL ALSO BE APPLIED TO FACE OF LUG UNDER FLANGE. SEALANT SHALL BE APPLIED IN SUCH A MANNER AS TO ENSURE COMPLETE COVERAGE OF INSIDE FACE OF BUSHING FLANGE WHEN BUSHING IS INSTALLED. WIPE OFF ANY EXCESS SEALANT AROUND PERIPHERY OF BUSHING FLANGE. WIPE ANY EXCESS SEALANT FROM OTHER END OF BUSHING ALSO.</p>			
PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 5 Nov 02	

REV:	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 2006106-109	NATIONAL STOCK NUMBER 1620-01-442-0167	
<p>H. FOR BUSHINGS WITH EXTERNAL GREASE GROOVES THE INSIDE OF THE LUG WILL BE COATED WITH MIL-C-16173 PRIOR TO BUSHING INSTALLATION AND FACE OF LUG WILL BE COATED WITH MIL-PRF-81733 PER PARAGRAPH G, IF BUSHING IS FLANGED.</p> <p>18. OO-ALC/LGHLEN SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT MATERIAL REVIEW BOARD (MRB'S) DISPOSITIONS PRIOR TO SHIPMENT OF DISCREPANT ITEM. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE SHALL BE SUBMITTED FOR MRB DISPOSITION.</p> <p>19. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENT/ASSEMBLY. CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE LANDING GEAR COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO OO-ALC/LGHLEN.</p> <p>20. AFTER CONTRACT AWARD THE SUCCESSFUL BIDDER SHALL PROVIDE A COPY OF THE PROCESSING DOCUMENTATION (ROUTING DOCUMENTS AND PROCESS SPECIFICATIONS) TO LGHLEN FOR FINAL REVIEW BEFORE PRODUCTION BEGINS.</p> <p>21. THE FORGING SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.</p> <p style="padding-left: 40px;">A. PRIOR TO CONTRACT AWARD, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION, FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PARTS BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.</p> <p style="padding-left: 40px;">B. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 FOR STEEL FORGINGS AND SAE AMS-A-22771 FOR ALUMINUM FORGINGS. THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.</p> <p>22. FORGING SOURCE, CONTROL AND LOCATION OF DIES:</p> <p style="padding-left: 40px;">A. FORGING DRAWING: 2006256-7</p> <p style="padding-left: 40px;">B. DIE # 4902</p> <p style="padding-left: 40px;">C. CONTROL OF FORGING PROCESS: U.S.A.F.</p> <p style="padding-left: 40px;">D. LOCATION OF FORGING DIES: W. PAT CROW 200 LUXTON STR PO BOX 1720 FT. WORTH, TX 76101 PHONE: 817-536-2861</p>		
PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 5 Nov 02

REV:

ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET
(ATTACHMENT "A")

PART NUMBER

2006106-109 ,

NATIONAL STOCK NUMBER

1620-01-442-0167

23. APPLY A THIN UNIFORM COATING OF PRIMER PER MIL-PRF-85582 TO ALL BUSHING BORES AND ALLOW TO FULLY CURE, PRIOR TO INSTALLATION OF BUSHING. (PRIMER SHALL NOT OBSTRUCT GREASE PASSAGES).

PREPARED BY

CAROL HYER

SYMBOL

LGMPM

DATE

5 Nov 02

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-442-0167
NOUN: PISTON, LANDING GEAR

PART NUMBER (P/N)2006106-105
AIRCRAFT: F-16

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 2006106-105 and specification MIL-A-22771. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS

(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-01-442-0167

PART NUMBER (P/N) 2006106-105

NOUN: PISTON, LANDING GEAR

AIRCRAFT: F-16

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$3,000.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF <div style="text-align: center; padding: 10px;"> PISTON ASSY, INNER - MLG SHOCK STRUT </div>		
2. PART NUMBER <div style="text-align: center; padding: 5px;">2006101-105</div>	3. NATIONAL STOCK NUMBER <div style="text-align: center; padding: 5px;">1620-01-296-4328</div>	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. USE MATERIAL SAE AMS 6257 IN LIEU OF MIL-S-8844.		
6. HEAT TREAT PER SAE AMS-H-6875 IN LIEU OF MIL-H-6875.		
7. FOR PARTS HEAT TREATED TO 180 KSI AND ABOVE, ANY SURFACE GROUND/MACHINED AFTER HEAT TREAT, SHALL BE INSPECTED FOR ABUSIVE GRINDING/MACHINING BURNS PER MIL-STD-867. GRINDING SHALL BE PER MIL-STD-866 OR MM5759.		
8. SHOT PEEN PER SAE AMS-S-13165 IN LIEU OF MIL-S-13165.		
9. SPECIFICATION MM4951 CADMIUM PLATING WILL NOT BE FURNISHED AS IT IS LIMITED (PROPRIETARY) DATA. AS AN ALTERNATE USE SPECIFICATION MM5542, CADMIUM PLATING. (PROVIDED)		
10. CHROME PLATE TO DRAWING REQUIREMENTS AND SAE AMS QQ-C-320 IN LIEU OF QQ-C-320.		
11. SERIAL NUMBER SHALL BE VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL), IN 0.09" LETTERS 0.004" - 0.007" DEEP IN THE LOCATION INDICATED. IF THE DRAWING DOES NOT INDICATE A LOCATION, OO-ALC/LGHLEN SHALL PROVIDE S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION SHALL BEGIN WITH THE CAGE OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-03-001".		
12. PERFORM MAGNETIC PARTICLE INSPECTION PER ASTM E 1444 IN LIEU OF MIL-I-6868. USE FULL WAVE DIRECT CURRENT (FWDC), WET CONTINUOUS METHOD, FLUORESCENT TYPE WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN AIA/NAS NAS-410.		
13. PAINT REQUIREMENTS AS FOLLOWS: <div style="margin-left: 20px; padding: 10px 0;"> A. APPLY ONE COAT EPOXY PRIMER PER MIL-PRF-85582, TYPE I, CLASS 2. ALTERNATE ONE COAT OF EPOXY PRIMER PER MIL-PRF-23377, TYPE I IN LIEU OF MIL-P-23377. B. APPLY TWO TOPCOATS PER MIL-PRF-85285, TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595 IN LIEU OF MIL-C-83286. </div>		
14. DIMENSIONING AND TOLERANCING PER ASME Y14.5 IN LIEU OF ANSI Y14.5.		
PREPARED BY <div style="text-align: center; padding: 5px;">CAROL HYER</div>	SYMBOL <div style="text-align: center; padding: 5px;">LGMPM</div>	DATE <div style="text-align: center; padding: 5px;">24 Apr 03</div>

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 2006101-105	NATIONAL STOCK NUMBER 1620-01-296-4328	
<p>15. CORROSION PROTECTION PER MIL-C-16173 GRADE 3, MIL-C-11796 CLASS 3 OR MM5752.</p> <p>16. SURFACE TEXTURE PER ASME B46.1 IN LIEU OF ASA B46.1.</p> <p>17. IDENTIFICATION AND MARKING PER MIL-STD-130 OR TM1040.</p> <p>18. CLEANLINESS PER SAE AMS 2300 IN LIEU OF AMS 2300.</p> <p>19. CHEMICAL MILL PER SAE AMS-C-81769 OR MM5527.</p> <p>20. PER DRAWING 2006102, FLAG NOTE 2, USE MATERIAL SAE AMS 5643 IN LIEU OF AMS 5643.</p> <p>21. PER DRAWING 2006102, FLAT NOTE 3, USE MATERIAL SAE AMS 4640 IN LIEU OF AMS 4640 OR ASTM B196, IN LIEU OF QQ-C-530.</p> <p>22. CHROME PLATE TO DRAWING REQUIREMENTS AND SAE AMS QQ-C-320 IN LIEU OF QQ-C-320.</p> <p>23. PERFORM FLUORESCENT PENETRANT INSPECTION PER ASTM E1417, TYPE I, METHOD B OR C, LEVEL 3 OR 4, IN LIEU OF MIL-I-6866, WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN AIA/NAS NAS-410.</p> <p>24. OO-ALC/LGHLEN SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT MATERIAL REVIEW BOARD (MRB'S) DISPOSITIONS PRIOR TO SHIPMENT OF DISCREPANT ITEM. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE SHALL BE SUBMITTED FOR MRB DISPOSITION.</p> <p>25. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENT/ASSEMBLY. CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE LANDING GEAR COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO OO-ALC/LGHLEN.</p> <p>26. AFTER CONTRACT AWARD, THE SUCCESSFUL BIDDER SHALL PROVIDE A COPY OF THE PROCESSING DOCUMENTATION (ROUTING DOCUMENTS AND PROCESS SPECIFICATIONS) TO LGHLEN FOR FINAL REVIEW BEFORE PRODUCTION BEGINS.</p>		
PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 24 Apr 03

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 2006101-105	NATIONAL STOCK NUMBER 1620-01-296-4328	
<p>27. INSTALL BUSHINGS PER THE FOLLOWING IN LIEU OF MM5743:</p> <p>A. THE BUSHING INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE I.D. OF THE HOUSING INTO WHICH THE BUSHING IS INSTALLED, OR THE FINISH OF THE O.D. OF THE BUSHING. FORCED INSTALLATION OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A PRESS OR HAMMER IS NOT PERMITTED, AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER MAY BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING.</p> <p>B. PRIOR TO BUSHING INSTALLATION, THE PARTS AND HOUSING BORE SHALL BE CLEANED WITH A CLEANING SOLVENT TO REMOVE ALL CONTAMINATION.</p> <p>C. LIQUID NITROGEN SHALL BE USED FOR ALL SUB-ZERO INSTALLATIONS UNLESS SOME OTHER SUB-ZERO COOLANT IS SPECIFIED, AND APPROVED BY OO-ALC/LGHLEN ENGINEERING. THE SOAK TIME OF THE BUSHING IN THE LIQUID NITROGEN SHALL BE SUFFICIENT TO ALLOW THE BUSHING TO REACH THE SAME TEMPERATURE AS THE COOLANT.</p> <p>D. THE BUSHING SHALL BE INSTALLED INTO THE HOUSING IMMEDIATELY UPON REMOVAL FROM THE COOLANT WITH AN ABSOLUTE MINIMUM OF LOST TIME. TRIAL RUNS SHALL BE ACCOMPLISHED AS NECESSARY TO MINIMIZE INSTALLATION TIME WHICH SHOULD BE IN THE ORDER OF ABOUT SEVEN (7) SECONDS MAXIMUM.</p> <p>E. IT MAY OCCASIONALLY BE NECESSARY TO HEAT THE HOUSING INTO WHICH THE BUSHING IS TO BE INSTALLED, IN ADDITION TO SUB-ZERO COOLING OF THE BUSHING. DETAIL PARTS IN PROCESS WILL NOT HAVE PAINT OR SEALANT OR OTHER ORGANIC MATERIAL APPLIED PRIOR TO HEATING, THE PARTS SHALL BE HEATED BY THE USE OF RADIANT HEAT TECHNIQUES, SUCH AS THERMAL BLANKETS, INFRARED LAMPS ETC.; TO THE MAXIMUM TEMPERATURE OF 250 F. TEMPERATURE MEASURING DEVICES SHALL BE USED TO MONITOR HEAT AND SHALL BE LOCATED ON AREAS OF THE PART EXPECTED TO REACH MAXIMUM TEMPERATURE. NO SCALING, OXIDATION, OR CORROSION SHALL BE PERMITTED.</p> <p>F. BUSHINGS WITHOUT FLANGES SHALL BE INSTALLED INTO HOUSING BORE WHICH HAS RECEIVED A LIGHT COAT OF SEALANT PER MIL-PRF-81733. INSTALL SHRUNKEN BUSHING AND WIPE OFF ANY EXCESS SEALANT THAT MAY HAVE EXTRUDED AROUND THE PERIPHERY OF BOTH ENDS OF THE BUSHINGS.</p> <p>G. BUSHINGS WITH FLANGES SHALL BE INSTALLED IN A SIMILAR MANNER AS PARAGRAPH (F) EXCEPT SEALANT SHALL ALSO BE APPLIED TO FACE OF LUG UNDER FLANGE. SEALANT SHALL BE APPLIED IN SUCH A MANNER AS TO ENSURE COMPLETE COVERAGE OF INSIDE FACE OF BUSHING FLANGE WHEN BUSHING IS INSTALLED. WIPE OFF ANY EXCESS SEALANT AROUND PERIPHERY OF BUSHING FLANGE. WIPE ANY EXCESS SEALANT FROM OTHER END OF BUSHING ALSO.</p> <p>H. FOR BUSHINGS WITH EXTERNAL GREASE GROOVES THE INSIDE OF THE LUG WILL BE COATED WITH MIL-C-16173 PRIOR TO BUSHING INSTALLATION AND FACE OF LUG WILL BE COATED WITH MIL-PRF-81733 PER PARAGRAPH G, IF BUSHING IS FLANGED.</p> <p>28. APPLY A THIN UNIFORM COATING OF PRIMER PER MIL-PRF-23377 OR MIL-PRF-85582 (AFTER CADMIUM PLATING) TO ALL BUSHING BORES AND ALLOW TO FULLY CURE PRIOR TO INSTALLATION OF BUSHING (PRIMER SHALL NOT OBSTRUCT GREASE PASSAGES).</p>		
PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 24 Apr 03

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 2006101-105	NATIONAL STOCK NUMBER 1620-01-296-4328	
<p>29. THE REQUIRED FORGING WILL BE PROCURED FROM THE QUALIFIED FORGING SOURCE USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.</p> <p>A. PRIOR TO CONTRACT AWARD, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION, FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PART BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.</p> <p>B. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 FOR STEEL FORGINGS AND SAE AMS-A-22771 FOR ALUMINUM FORGINGS. THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.</p> <p>30. FORGING SOURCE, CONTROL AND LOCATION OF DIES:</p> <p>A. FORGING DRAWING: 2006251-1</p> <p>B. CONTROL OF FORGING PROCESS: GOODRICH</p> <p>C. LOCATION OF FORGING DIES:</p> <p>SIFCO IND., INC SIFCO FORGE GROUP 970 EAST 64TH STREET CLEVELAND, OH 44103-1620 PHONE: 216-432-6287 POC: MARILYN IRVINE DIE # 10692</p> <p>KROPP FORGE CO. 5301 W. ROOSEVELT RD. CICERO, IL 60804 PHONE: 708-652-6691 POC: CHUCK MEYER DIE # 7434</p>		
PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 24 Apr 03

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-01-296-4328
NOUN: Piston Assy. Inner- MLG Shock Strut

PART NUMBER (P/N) 2006101-105
AIRCRAFT: F-16

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 2006101-105 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-01-296-4328
NOUN: Piston Assy, Inner- MLG Shock Strut

PART NUMBER (P/N) 2006101-105
AIRCRAFT: F-16

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$2000.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

- c. This waiver will be granted if and only if the design control authority (LGHLEN) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHLEN reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF CYLINDER, OUTER, SHOCK STRUT - MLG		
2. PART NUMBER 2006134-1	3. NATIONAL STOCK NUMBER 1620-01-442-3188	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. MARKING AND IDENTIFICATION PER MIL-STD-130 IN LIEU OF TM1040.		
6. PER DRAWING REQUIREMENTS, SERIAL NUMBER SHALL BE VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL) IN 0.09" LETTERS 0.004" - 0.007" DEEP IN THE LOCATION INDICATED. IF THE DRAWING DOES NOT INDICATE A LOCATION, OO-ALC/LILE SHALL PROVIDE S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION SHALL BEGIN WITH THE CAGE (FSCM) OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-02-001".		
7. PER DRAWING REQUIREMENTS, PERFORM MAGNETIC PARTICLE INSPECTION PER ASTM E 1444 IN LIEU OF MIL-I-6868. USE FULL WAVE DIRECT CURRENT (FWDC), WET CONTINUOUS METHOD, FLUORESCENT TYPE WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: <u>NO DEFECTS ALLOWED</u> . THE INTENT OF <u>NO DEFECTS ALLOWED</u> IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.		
8. PER DRAWINGS 2006134 AND 2007207, MATERIAL PER SAE AMS 6257 IN LIEU OF MIL-S-8844 CL 3.		
9. PER DRAWING 2007207, CLEANLINESS PER SAE AMS 2300 IN LIEU OF AMS 2300.		
10. PER DRAWING REQUIREMENTS, HEAT TREAT PER SAE AMS-H-6875 IN LIEU OF MIL-H-6875 AND MM4990.		
11. FOR PARTS HEAT TREATED TO 180 KSI AND ABOVE, ANY SURFACE GROUND/MACHINED AFTER HEAT TREAT SHALL BE INSPECTED FOR ABUSIVE GRINDING/MACHINING BURNS PER MIL-STD-867. GRINDING SHALL BE PER MIL-STD-866 IN LIEU OF MM 5759.		
12. PER DRAWING REQUIREMENTS, CADMIUM PLATE PER MM5542 (SUPPLIED) IN LIEU OF MM4951.		
PREPARED BY JOAN HYATT	SYMBOL LGMPM	DATE 26 Mar 02

REV:	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 2006134-1	NATIONAL STOCK NUMBER 1620-01-442-3188	
<p>13. PER DRAWING 2006134, CHROME PLATE PER SAE AMS-QQ-C-320 CL 2 IN LIEU OF QQ-C-320 CL 2.</p> <p>14. PER DRAWING 2006134, SHOT PEEN PER SAE AMS-S-13165 IN LIEU OF MIL-S-13165.</p> <p>15. PER DRAWING 2006134, PAINT AS FOLLOWS:</p> <p>APPLY ONE COAT EPOXY WATERBORNE PRIMER PER MIL-PRF-85582 TYPE 1, CL 2. ALTERNATE ONE COAT OF EPOXY POLYAMIDE PRIMER PER MIL-PRF-23377 TYPE 1. APPLY TWO TOPCOATS POLYURETHANE PER MIL-PRF-85285 TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595 IN LIEU OF MIL-C-83286 WHICH HAS BEEN CANCELLED.</p> <p>16. PER DRAWING 2007207, FORGE PER SAE AMS-F-7190 GRADE A IN LIEU OF MIL-F-7190 GRADE A.</p> <p>17. THE FORGING SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.</p> <p style="margin-left: 40px;">A. PRIOR TO CONTRACT AWARD, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PARTS BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.</p> <p style="margin-left: 40px;">B. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 FOR STEEL FORGINGS. THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.</p> <p>18. FORGING SOURCES, CONTROL AND LOCATION OF DIES:</p> <p style="margin-left: 40px;">A. FORGING DRAWING: 2007207-1</p> <p style="margin-left: 40px;">B. DIE # 4912 (W. PAT CROW, INC.); DIE # 933 (SHULTZ STEEL); DIE # 10822 (SIFCO FORGE GROUP)</p> <p style="margin-left: 40px;">C. CONTROL OF FORGING PROCESS: W. PAT CROW, INC.; SHULTZ STEEL; SIFCO FORGE GROUP</p> <p style="margin-left: 40px;">D. LOCATION OF FORGING DIES:</p> <p style="margin-left: 40px;">W. PAT CROW, INC. 200 LUXTON STREET P.O. BOX 1720 FT. WORTH, TX 76101-1720 CAGE: 94790 (817) 536-2861 X280</p>		
PREPARED BY JOAN HYATT	SYMBOL LGMPM	DATE 26 MAR 02

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 2006134-1	NATIONAL STOCK NUMBER 1620-01-442-3188	
<p>SHULTZ STEEL 5321 FIRESTONE BLVD. SOUTHGATE, CA 90280-3629 CAGE: 86985 (323) 357-3208</p> <p>SIFCO FORGE GROUP 970 EAST 64TH STREET CLEVELAND, OH 44103-1620 CAGE: 78226 (216) 432-6284</p> <p>19. IF FORGING SOURCE IS NOT IDENTIFIED PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL ADVISE THE GOVERNMENT IN WRITING OF THE INTENT TO PROCURE NEW FORGING DIES AND THE PROPOSED FORGING SOURCE. THE CONTRACTOR SHALL NOT PROCEED TO OBTAIN NEW FORGINGS DIES WITHOUT THE EXPRESS WRITTEN CONSENT OF THE GOVERNMENT-PROCURING ACTIVITY. THE GOVERNMENT SHALL HAVE UNLIMITED USE OF THE DIES DEVELOPED UNDER THIS CONTRACT. THE CONTRACTOR SHALL INFORM THE FORGING HOUSE IN WRITING, AT THE SAME TIME OF THE ORDER FOR THE DIES IS PLACED, THAT THE GOVERNMENT HAS UNLIMITED USE RIGHTS OF THE DIES AND FORWARD A COPY OF THIS LETTER TO THE GOVERNMENT CONTRACTING OFFICER.</p> <p>20. AFTER CONTRACT AWARD, THE SUCCESSFUL BIDDER SHALL PROVIDE A COPY OF THE PROCESSING DOCUMENTATION (ROUTING DOCUMENTS AND PROCESS SPECIFICATIONS) TO LILE FOR FINAL REVIEW BEFORE PRODUCTION BEGINS.</p> <p>21. OO-ALC/LILE SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT MRB'S PRIOR TO SHIPMENT OF DISCREPANT ITEM. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE WILL BE SUBMITTED FOR MRB DISPOSITION.</p> <p>22. PRIOR TO CONTRACT AWARD, THE CONTRACTOR WILL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENTS/ASSEMBLIES. THE CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE THESE COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO THIS OFFICE OO-ALC/LILE.</p>		
PREPARED BY JOAN HYATT	SYMBOL LGMPM	DATE 26 Mar 02

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-442-3188
NOUN: Cylinder, Outer, Shock Strut- MLG

PART NUMBER (P/N)2006134-1
AIRCRAFT: F-16

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 2006134-1 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-442-3188
NOUN: Cylinder, Outer, Shock Strut- MLG

PART NUMBER (P/N)2006134-1
AIRCRAFT: F-16

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$5,000.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV: A	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS / STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF CYLINDER ASSY, INNER - SHOCK STRUT, NLG		
2. PART NUMBER 2006644-103	3. NATIONAL STOCK NUMBER 1620-01-071-0534	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. HEAT TREAT PER SAE AMS-H-6875 IN LIEU OF MIL-H-6875, WHICH HAS BEEN CANCELLED.		
6. FOR PARTS HEAT-TREATED TO 180 KSI AND ABOVE, ANY SURFACE GROUND/MACHINED AFTER HEAT TREAT, SHALL BE INSPECTED FOR ABUSIVE GRINDING/MACHINING BURNS PER MIL-STD-867. GRINDING SHALL BE PER MIL-STD-866.		
7. PERFORM MAGNETIC PARTICLE INSPECTION PER ASTM E 1444. USE FULL WAVE DIRECT CURRENT (FWDC), WET CONTINUOUS METHOD, FLUORESCENT TYPE WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.		
8. SHOT PEEN PER SAE AMS-S-13165 IN LIEU OF MIL-S-13165, WHICH HAS BEEN CANCELLED.		
9. INSTALL BUSINGS PER THE FOLLOWING IN LIEU OF MM5743:		
A. THE BUSHING INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE I.D. OF THE HOUSING INTO WHICH THE BUSHING IS INSTALLED, OR THE FINISH OF THE O.D. OF THE BUSHING. FORCED INSTALLATION OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A PRESS OR HAMMER IS NOT PERMITTED, AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER MAY BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING.		
B. PRIOR TO BUSHING INSTALLATION, THE PARTS AND HOUSING BORE SHALL BE CLEANED WITH A CLEANING SOLVENT TO REMOVE ALL CONTAMINATION.		
C. LIQUID NITROGEN SHALL BE USED FOR ALL SUB-ZERO INSTALLATIONS UNLESS SOME OTHER SUB-ZERO COOLANT IS SPECIFIED, AND APPROVED BY OO-ALC/LILEC ENGINEERING. THE SOAK TIME OF THE BUSHING IN THE LIQUID NITROGEN SHALL BE SUFFICIENT TO ALLOW THE BUSHING TO REACH THE SAME TEMPERATURE AS THE COOLANT.		
D. THE BUSHING SHALL BE INSTALLED INTO THE HOUSING IMMEDIATELY UPON REMOVAL FROM THE COOLANT WITH AN ABSOLUTE MINIMUM OF LOST TIME. TRIAL RUNS SHALL BE ACCOMPLISHED AS NECESSARY TO MINIMIZE INSTALLATION TIME WHICH SHOULD BE IN THE ORDER OF ABOUT SEVEN (7) SECONDS MAXIMUM.		
PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 8 Mar 03

REV: A	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 2006644-103	NATIONAL STOCK NUMBER 1620-01-071-0534	
<p>E. IT MAY OCCASIONALLY BE NECESSARY TO HEAT THE HOUSING INTO WHICH THE BUSHING IS TO BE INSTALLED, IN ADDITION TO SUB-ZERO COOLING OF THE BUSHING. DETAIL PARTS IN PROCESS WILL NOT HAVE PAINT OR SEALANT OR OTHER ORGANIC MATERIAL APPLIED PRIOR TO HEATING, THE PARTS SHALL BE HEATED BY THE USE OF RADIANT HEAT TECHNIQUES, SUCH AS THERMAL BLANKETS, INFRARED LAMPS ETC.; TO THE MAXIMUM TEMPERATURE OF 250 F. TEMPERATURE MEASURING DEVICES SHALL BE USED TO MONITOR HEAT AND SHALL BE LOCATED ON AREAS OF THE PART EXPECTED TO REACH MAXIMUM TEMPERATURE. NO SCALING, OXIDATION, OR CORROSION SHALL BE PERMITTED.</p> <p>F. BUSHINGS WITHOUT FLANGES SHALL BE INSTALLED INTO HOUSING BORE WHICH HAS RECEIVED A LIGHT COAT OF SEALANT PER MIL-PRF-81733. INSTALL SHRUNKEN BUSHING AND WIPE OFF ANY EXCESS SEALANT THAT MAY HAVE EXTRUDED AROUND THE PERIPHERY OF BOTH ENDS OF THE BUSHINGS.</p> <p>G. BUSHINGS WITH FLANGES SHALL BE INSTALLED IN A SIMILAR MANNER AS PARAGRAPH (F) EXCEPT SEALANT SHALL ALSO BE APPLIED TO FACE OF LUG UNDER FLANGE. SEALANT SHALL BE APPLIED IN SUCH A MANNER AS TO ENSURE COMPLETE COVERAGE OF INSIDE FACE OF BUSHING FLANGE WHEN BUSHING IS INSTALLED. WIPE OFF ANY EXCESS SEALANT AROUND PERIPHERY OF BUSHING FLANGE. WIPE ANY EXCESS SEALANT FROM OTHER END OF BUSHING ALSO.</p> <p>H. FOR BUSHINGS WITH EXTERNAL GREASE GROOVES THE INSIDE OF THE LUG WILL BE COATED WITH MIL-C-16173 PRIOR TO BUSHING INSTALLATION AND FACE OF LUG WILL BE COATED WITH MIL-PRF-81733 PER PARAGRAPH G, IF BUSHING IS FLANGED.</p> <p>10. APPLY A THIN UNIFORM COATING OF PRIMER PER MIL-PRF-23377 OR MIL-PRF-85582 (AFTER CADMIUM PLATING) TO ALL BUSHING BORES AND ALLOW TO FULLY CURE PRIOR TO INSTALLATION OF BUSHING (PRIMER SHALL NOT OBSTRUCT GREASE PASSAGES).</p> <p>11. PAINT REQUIREMENTS ARE AS FOLLOWS:</p> <p style="margin-left: 40px;">A. APPLY ONE COAT EPOXY WATERBORNE PRIMER PER MIL-PRF-85582, TYPE I, CLASS 2. ALTERNATE ONE COAT OF EPOXY POLYAMIDE PRIMER PER MIL-PRF-23377, TYPE I.</p> <p style="margin-left: 40px;">B. APPLY TWO TOPCOATS POLYURETHANE PER MIL-PRF-85285, TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595, IN LIEU OF MIL-C-83286, WHICH HAS BEEN CANCELLED.</p> <p>12. SPECIFICATION MM4951 CADMIUM PLATING WILL NOT BE FURNISHED AS IT IS LIMITED (PROPRIETARY) DATA. AS AN ALTERNATE USE SPEC MM5542, CADMIUM PLATING (PROVIDED) OR MIL-STD-870, TYPE 2, CLASS 1.</p> <p>13. CORROSION PROTECTION PER MIL-C-16173 GRADE 1 OR MIL-C-11796 CLASS 1 OR 2 IN LIEU OF MM5752.</p> <p>14. PERFORM FLUORESCENT PENETRANT INSPECTION PER ASTM E 1417, TYPE I, METHOD B OR C, LEVEL 3 OR 4 WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.</p>		
PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 8 Mar 03

REV: A	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 2006644-103	NATIONAL STOCK NUMBER 1620-01-071-0534	
<p>15. SERIAL NUMBER SHALL BE VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL), IN 0.09" LETTERS 0.004" - 0.007" DEEP IN THE LOCATION INDICATED. IF THE DRAWING DOES NOT INDICATE A LOCATION, OO-ALC/LILE WILL PROVIDE S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION SHALL BEGIN WITH THE CAGE OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-03-001".</p> <p>16. IDENTIFICATION AND MARKING PER MIL-STD-130 IN LIEU OF TM1040.</p> <p>17. CHEMICAL MILL PER SAE AMS-C-81769 IN LIEU OF MM5527.</p> <p>18. THE FORGINGS SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.</p> <p style="margin-left: 40px;">A. PRIOR TO CONTRACT AWARD, THE DETAIL PART BIDDER SHALL PROVIDE CERTIFICATION, FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PART BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.</p> <p style="margin-left: 40px;">B. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 FOR STEEL FORGINGS AND SAE AMS-A-22771 FOR ALUMINUM FORGINGS. THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.</p> <p>19. FORGING SOURCE, CONTROL AND LOCATION OF DIES:</p> <p style="margin-left: 40px;">A. FORGING DRAWING: 2006744-1 DIE NUMBER: 10124</p> <p style="margin-left: 40px;">B. CONTROL OF FORGING PROCESS: B.F. GOODRICH</p> <p style="margin-left: 40px;">C. LOCATION OF FORGING DIES:</p> <p style="margin-left: 40px;">SIFCO IND., INC SIFCO FORGE GROUP 970 E. 64TH STR. CLEVELAND, OH 44103-1620 PHONE: 216-881-8600 X287 POC: MARILYN IRVINE</p>		
PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 8 Mar 03

REV: A	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 2006644-103	NATIONAL STOCK NUMBER 1620-01-071-0534	
<p>20. OO-ALC/LILE SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT MATERIAL REVIEW BOARD'S (MRB'S) DISPOSITIONS PRIOR TO SHIPMENT OF DISCREPANT ITEM. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE SHALL BE SUBMITTED FOR MRB DISPOSITION.</p> <p>21. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENT/ASSEMBLY. CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE LANDING GEAR COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO OO-ALC/LILE.</p> <p>22. AFTER CONTRACT AWARD THE SUCCESSFUL BIDDER SHALL PROVIDE A COPY OF THE PROCESSING DOCUMENTATION (ROUTING DOCUMENTS AND PROCESS SPECIFICATIONS) TO LILE FOR FINAL REVIEW BEFORE PRODUCTION BEGINS.</p>		
PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 8 Mar 03

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN)«1620-01-071-0534»
NOUN: «CYL ASSY, INNER SHOCK STRUT, NLG »

PART NUMBER (P/N)«2006644-103»
AIRCRAFT:«F-16»

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N «2006644-103» and specification SAE AMS-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) « 1620-01-071-0534 »
NOUN: « CYL ASSY, INNER SHOCK STRUT, NLG »

PART NUMBER (P/N) « 2006644-103 »
AIRCRAFT: « F-16 »

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$«5000.00».

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REVISION: 06

* HISTORY *

[illegible]

STANDARD ENGINEERING TEXT

ALL GOVERNMENT/MILITARY SPECIFICATIONS AND STANDARDS WILL NOT BE FURNISHED.
TO OBTAIN THESE SPECS AND STDS WRITE TO:

DOES

DODSP

BUILDING 4/SECTION D

700 ROBINS AVE.

PHILADELPHIA PA. 19111-5098

TELEPHONE: (215) 697-2179

FAX: (215) 697-1462

TO VIEW OR ORDER: [HTTP://WWW.DODSSP.DAPS.MIL](http://www.dodssp.daps.mil)

ENGINEERING DATA LIST REMARKS

FURNISHED METHOD CODE LEGEND:

FURNISHED METHOD CODE LEGEND:

C - CLASSIFIED DOCUMENT.	X - DATA SUPPLIED (NOT IN EDCARS).	G - GOV'T DOCUMENT.
S - FURNISHED WITH SOLICITATION.	R - FURNISHED BY PCD UPON REQUEST.	O - OTHERS, CONTRACTOR
M - STABLE BASE DRAWING REQUIRED;	P - PARTIAL DOCUMENT FURNISHED.	MUST ACQUIRE.
	V - VENDOR DRAWING.	

REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS /STANDARDS WILL NOT BE FURNISHED IN THE BID SET. 1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF CYLINDER, STRUT, MLG		
2. PART NUMBER 14-40602-7	3. NATIONAL STOCK NUMBER 1620-01-134-9231	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. PER DRAWING REQUIREMENTS, PERFORM FLUORESCENT PENETRANT INSPECTION PER ASTM E 1417, TYPE I, METHOD B OR C, LEVEL 3 OR 4 IN LIEU OF MIL-I-6866 WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: <u>NO DEFECTS ALLOWED</u> . THE INTENT OF <u>NO DEFECTS ALLOWED</u> IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.		
6. PER DRAWING REQUIREMENTS, PERFORM MAGNETIC PARTICLE INSPECTION PER ASTM E 1444 IN LIEU OF MIL-I-6868. USE FULL WAVE DIRECT CURRENT (FWDC), WET CONTINUOUS METHOD, FLUORESCENT TYPE WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: <u>NO DEFECTS ALLOWED</u> . THE INTENT OF <u>NO DEFECTS ALLOWED</u> IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS 410.		
7. PER DRAWING REQUIREMENTS, MARK AND IDENTIFY PER MIL-STD-130 IN LIEU OF IM-8 AND IM-24.		
8. PER DRAWING REQUIREMENTS, HEAT TREAT ALUMINUM ALLOYS PER SAE AMS-H-6088 IN LIEU OF HT9.2.		
9. PER DRAWING REQUIREMENTS, HEAT TREAT PER SAE AMS-H-6875 IN LIEU OF HT-17, HT-21 AND HT-22.		
10. PER DRAWING REQUIREMENTS, FINISH PER MIL-C-16173 GR 1 OR 2 IN LIEU OF NFS 76.		
11. PER DRAWING 6-40638, MATERIAL PER ASTM B196, B197, B194 IN LIEU OF NAI-1255 AND QQ-C-530.		
12. PER DRAWING 6-40637 ECO 82C293, MATERIAL PER SAE AMS 4881 IN LIEU OF NAI-1255.		
13. PER DRAWINGS 14-40636, 14-40622 AND 14-40642, MATERIAL PER SAE AMS-S-6758 COND. D1 IN LIEU OF MIL-S-6758 COND. D1.		
14. PER DRAWING 14-40632, MATERIAL PER SAE AMS-QQ-S-763 IN LIEU OF QQ-S-763.		
15. PER DRAWING REQUIREMENTS, CADMIUM PLATE PER SAE AMS-QQ-P-416 TYPE II, CL 3 FOR HEAT TREAT UNDER 180,000 PSI. OVER 180,000 PSI USE MIL-STD-870 TYPE II CL 2 IN LIEU OF STF0173, STF0175 AND FP-2.		
16. USE SAE AMS-A-22771 IN LIEU OF MP-314 AND NAI 1306.		
17. TOUCH UP BY USING THE FOLLOWING IN LIEU OF STF0273: SAE AMS-C-5541 IN LIEU OF FP-28, PRIMER PER MIL-PRF-23377 IN LIEU OF FP-80 AND CHROME ACID BRUSH PER SAE AMS-M-3171 TYPE IV IN LIEU OF F-5.3.		
PREPARED BY JOAN HYATT	SYMBOL LGMPM	DATE 11 Oct 01

REV:	ENGINEERING DATA REQUIREMENT (ATTACHMENT "A")		CONTINUATION SHEET
PART NUMBER 14-40602-7	NATIONAL STOCK NUMBER 1620-01-134-9231		
<p>18. APPLY FINISH SYSTEM IN SEQUENCE IN LIEU OF STF0337: SULFURIC ACID ANODIZE PER SAE AMS-A-8625 TYPE II CL 1. CORROSION PREVENTATIVE COMPOUND PER MIL-C-16173 GRADE 2.</p> <p>19. APPLY ONE COAT EPOXY WATERBORNE PRIMER PER MIL-PRF-85582 TYPE 1, CL 2. ALTERNATE ONE COAT OF EPOXY POLYAMIDE PRIMER PER MIL-PRF-23377 TYPE 1. APPLY TWO TOPCOATS POLYURETHANE PER MIL-PRF-85285 TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595 IN LIEU OF STF0120, WHICH HAS BEEN CANCELLED.</p> <p>20. THREADS PER MIL-S-007742 IN LIEU OF FH-32.</p> <p>21. PASSIVATE PER SAE AMS-QQ-P-35 IN LIEU OF STF0168.</p> <p>22. PRESERVATION, PACKING, HANDLING AND STORAGE PER MIL-C-81309 IN LIEU OF P6968.</p> <p>23. SERIAL NUMBER SHALL BE VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL) IN 0.09" LETTERS 0.004" - 0.007" DEEP IN THE LOCATION INDICATED. IF THE DRAWING DOES NOT INDICATE A LOCATION, OO-ALC/LILE SHALL PROVIDE S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION SHALL BEGIN WITH THE CAGE (FSCM) OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-01-001".</p> <p>24. APPLY A THIN UNIFORM COATING OF PRIMER PER MIL-PRF-23377 OR MIL-PRF-85582 AFTER CADMIUM PLATING TO ALL BUSHING BORES AND ALLOW TO FULLY CURE PRIOR TO INSTALLATION OF BUSHING. PRIMER SHALL NOT OBSTRUCT GREASE PASSAGES.</p> <p>25. INSTALL BUSHINGS PER THE FOLLOWING IN LIEU OF MA-103:</p> <p style="margin-left: 40px;">A. THE BUSHING INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE I.D. OF THE HOUSING INTO WHICH THE BUSHING IS INSTALLED, OR THE FINISH OF THE O.D. OF THE BUSHING. FORCED INSTALLATION OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A PRESS OR HAMMER IS NOT PERMITTED, AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER MAY BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING.</p> <p style="margin-left: 40px;">B. PRIOR TO BUSHING INSTALLATION, THE PARTS AND HOUSING BORE SHALL BE CLEANED WITH A CLEANING SOLVENT TO REMOVE ALL CONTAMINATION.</p> <p style="margin-left: 40px;">C. LIQUID NITROGEN SHALL BE USED FOR ALL SUB-ZERO INSTALLATIONS UNLESS SOME OTHER SUB-ZERO COOLANT IS SPECIFIED, AND APPROVED BY OO-ALC/LILE ENGINEERING. THE SOAK TIME OF THE BUSHING IN THE LIQUID NITROGEN SHALL BE SUFFICIENT TO ALLOW THE BUSHING TO REACH THE SAME TEMPERATURE AS THE COOLANT.</p>			
PREPARED BY JOAN HYATT	SYMBOL LGMPM	DATE 11 Oct 01	

REV:	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 14-40602-7	NATIONAL STOCK NUMBER 1620-01-134-9231	
<p>D. THE BUSHING SHALL BE INSTALLED INTO THE HOUSING IMMEDIATELY UPON REMOVAL FROM THE COOLANT WITH AN ABSOLUTE MINIMUM OF LOST TIME. TRIAL RUNS SHALL BE ACCOMPLISHED AS NECESSARY TO MINIMIZE INSTALLATION TIME WHICH SHOULD BE IN THE ORDER OF ABOUT SEVEN (7) SECONDS MAXIMUM.</p> <p>E. IT MAY OCCASIONALLY BE NECESSARY TO HEAT THE HOUSING INTO WHICH THE BUSHING IS TO BE INSTALLED, IN ADDITION TO SUB-ZERO COOLING OF THE BUSHING. DETAIL PARTS IN PROCESS, WILL NOT HAVE PAINT OR SEALANT OR OTHER ORGANIC MATERIAL APPLIED PRIOR TO HEATING, THE PARTS SHALL BE HEATED BY THE USE OF RADIANT HEAT TECHNIQUES, SUCH AS THERMAL BLANKETS, INFRARED LAMPS ETC.; TO THE MAXIMUM TEMPERATURE OF 250 F. TEMPERATURE MEASURING DEVICES SHALL BE USED TO MONITOR HEAT AND SHALL BE LOCATED ON AREAS OF THE PART EXPECTED TO REACH MAXIMUM TEMPERATURE. NO SCALING, OXIDATION, OR CORROSION SHALL BE PERMITTED.</p> <p>F. BUSHINGS WITHOUT FLANGES SHALL BE INSTALLED INTO HOUSING BORE WHICH HAS RECEIVED A LIGHT COAT OF SEALANT PER MIL-PRF-81733. INSTALL SHRUNKEN BUSHING AND WIPE OFF ANY EXCESS SEALANT THAT MAY HAVE EXTRUDED AROUND THE PERIPHERY OF BOTH ENDS OF THE BUSHINGS.</p> <p>G. BUSHINGS WITH FLANGES SHALL BE INSTALLED IN A SIMILAR MANNER AS PARAGRAPH (F) EXCEPT SEALANT SHALL ALSO BE APPLIED TO FACE OF LUG UNDER FLANGE. SEALANT SHALL BE APPLIED IN SUCH A MANNER AS TO ENSURE COMPLETE COVERAGE OF INSIDE FACE OF BUSHING FLANGE WHEN BUSHING IS INSTALLED. WIPE OFF ANY EXCESS SEALANT AROUND PERIPHERY OF BUSHING FLANGE. WIPE ANY EXCESS SEALANT FROM OTHER END OF BUSHING ALSO.</p> <p>H. FOR BUSHINGS WITH EXTERNAL GREASE GROOVES, THE INSIDE OF THE LUG WILL BE COATED WITH MIL-C-16173 PRIOR TO BUSHING INSTALLATION AND FACE OF LUG WILL BE COATED WITH MIL-PRF-81733 PER PARAGRAPH G, IF BUSHING IS FLANGED.</p> <p>26. THE FORGING SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.</p> <p style="padding-left: 40px;">A. PRIOR TO CONTRACT AWARD, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PARTS BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.</p> <p style="padding-left: 40px;">B. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 FOR STEEL FORGINGS AND SAE AMS-A-22771 FOR ALUMINUM FORGINGS. THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.</p>		
PREPARED BY JOAN HYATT	SYMBOL LGMPM	DATE 11 Oct 01

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 14-40602-7	NATIONAL STOCK NUMBER 1620-01-134-9231	
<p>27. THE FORGING SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES.</p> <p style="margin-left: 40px;">A. PRIOR TO CONTRACT AWARD, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PARTS BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.</p> <p style="margin-left: 40px;">B. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-A-22771 IN LIEU OF NAI-1306 FOR ALUMINUM FORGINGS. THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.</p> <p>28. FORGING SOURCE, CONTROL AND LOCATION OF DIES:</p> <p style="margin-left: 40px;">A. FORGING DRAWING: 14-40602-1-3-5F</p> <p style="margin-left: 40px;">B. DIE #: 6796</p> <p style="margin-left: 40px;">C. CONTROL OF FORGING PROCESS: NORTHROP</p> <p style="margin-left: 40px;">D. LOCATION OF FORGING DIES:</p> <p style="margin-left: 40px;">KAISER ALUMINUM 1001 MCWANE BLVD. P.O. BOX 2398 OXNARD, CA 93034 (805) 488-4401 CAGE: 28317</p> <p>29. IF FORGING SOURCE IS NOT IDENTIFIED PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL ADVISE THE GOVERNMENT IN WRITING OF THE INTENT TO PROCURE NEW FORGING DIES AND THE PROPOSED FORGING SOURCE. THE CONTRACTOR SHALL NOT PROCEED TO OBTAIN NEW FORGINGS DIES WITHOUT THE EXPRESS WRITTEN CONSENT OF THE GOVERNMENT-PROCURING ACTIVITY. THE GOVERNMENT SHALL HAVE UNLIMITED USE OF THE DIES DEVELOPED UNDER THIS CONTRACT. THE CONTRACTOR SHALL INFORM THE FORGING HOUSE IN WRITING, AT THE SAME TIME OF THE ORDER FOR THE DIES IS PLACED, THAT THE GOVERNMENT HAS UNLIMITED USE RIGHTS OF THE DIES AND FORWARD A COPY OF THIS LETTER TO THE GOVERNMENT CONTRACTING OFFICER.</p>		
PREPARED BY JOAN HYATT	SYMBOL LGMPM	DATE 11 Oct 01

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 14-40602-7	NATIONAL STOCK NUMBER 1620-01-134-9231	
<p>30. AFTER CONTRACT AWARD, THE SUCCESSFUL BIDDER SHALL PROVIDE A COPY OF THE PROCESSING DOCUMENTATION (ROUTING DOCUMENTS AND PROCESS SPECIFICATIONS) TO LILE FOR FINAL REVIEW BEFORE PRODUCTION BEGINS.</p> <p>31. OO-ALC/LILE SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT MRB'S PRIOR TO SHIPMENT OF DISCREPANT ITEMS. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE WILL BE SUBMITTED FOR MRB DISPOSITION.</p> <p>32. PRIOR TO CONTRACT AWARD, THE CONTRACTOR WILL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENT/ASSEMBLY. CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE LANDING GEAR COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO THIS OFFICE OO-ALC/LILE.</p>		
PREPARED BY JOAN HYATT	SYMBOL LGMPM	DATE 11 Oct 01

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-134-9231
NOUN: Cylinder, Strut, MLG

PART NUMBER (P/N)14-40602-7
AIRCRAFT: F-5

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 14-40602-7 and specification MIL-A-22771. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS

(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-01-134-9231

PART NUMBER (P/N) 14-40602-7

NOUN: Cylinder, Strut, MLG

AIRCRAFT: F-5

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$1500.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

* HISTORY *

[illegible]

STANDARD ENGINEERING TEXT

ENGINEERING DATA LIST REMARKS

FURNISHED METHOD CODE LEGEND:

C - CLASSIFIED DOCUMENT.	X - DATA SUPPLIED (NOT IN EDCARS).	G - GOV'T DOCUMENT.
S - FURNISHED WITH SOLICITATION.	R - FURNISHED BY PCD UPON REQUEST.	O - OTHERS, CONTRACTOR
M - STABLE BASE DRAWING REQUIRED;	P - PARTIAL DOCUMENT FURNISHED.	MUST ACQUIRE.
	V - VENDOR DRAWING;	A - DATA NOT

REV:

ENGINEERING DATA REQUIREMENTS

(ATTACHMENT "A")

NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.

1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF

CYLINDER, CYLINDER & PISTON ASSEMBLY - NOSE LANDING GEAR

2. PART NUMBER

14-41607-3

3. NATIONAL STOCK NUMBER

1620-00-127-5785

4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.

5. MARKING AND IDENTIFICATION PER MIL-STD-130 IN LIEU OF IM-24.

6. PER DRAWING REQUIREMENTS, SERIAL NUMBER SHALL BE VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL) IN 0.09" LETTERS 0.004" - 0.007" DEEP IN THE LOCATION INDICATED. IF THE DRAWING DOES NOT INDICATE A LOCATION, OO-ALC/LILE SHALL PROVIDE S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION SHALL BEGIN WITH THE CAGE (FSCM) OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-02-001".

7. PER DRAWING REQUIREMENTS, PERFORM MAGNETIC PARTICLE INSPECTION PER ASTM E 1444 IN LIEU OF IT-61. USE FULL WAVE DIRECT CURRENT (FWDC), WET CONTINUOUS METHOD, FLUORESCENT TYPE WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.

8. MATERIAL PER SAE AMS 6425 IN LIEU OF NAI-1274 AND NAI-1275.

9. DIMENSIONS AND TOLERANCES PER ASME Y14.5 IN LIEU OF 3-40500 AND 20Y201.

10. THREADS PER MIL-S-8879 IN LIEU OF FH-32.

11. HEAT TREAT PER SAE AMS-H-6875 IN LIEU OF HT-22.

12. FOR PARTS HEAT-TREATED TO 180 KSI AND ABOVE, ANY SURFACE GROUND/MACHINED AFTER HEAT TREAT SHALL BE INSPECTED FOR ABUSIVE GRINDING/MACHINING BURNS PER MIL-STD-867. GRINDING SHALL BE PER MIL-STD-866.

PREPARED BY

JOAN HYATT

SYMBOL

LGMPM

DATE

26 Jun 02

REV:		ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 14-41607-3		NATIONAL STOCK NUMBER 1620-00-127-5785	
<p>13. SHOT PEEN PER SAE AMS -S-13165 IN LIEU OF MA-57.</p> <p>14. PER NOTE 8 ON DRAWING, USE MIL-STD-1501 TYPE II CL 2 IN LIEU OF STF0352.</p> <p>15. PER NOTE 9 ON DRAWING, USE MIL-STD-870 TYPE II CL 1 IN LIEU OF STF0180.</p> <p>16. TEMPORARY PROTECTION PER MIL-C-16173 GR 3 OR 4 IN LIEU OF FP-68 GR 3.</p> <p>17. MACHINE PARTS USING BEST SHOP PRACTICE IN LIEU OF MA-116.</p> <p>18. AFTER CONTRACT AWARD, THE SUCCESSFUL BIDDER SHALL PROVIDE A COPY OF THE PROCESSING DOCUMENTATION (ROUTING DOCUMENTS AND PROCESS SPECIFICATIONS) TO LILE FOR FINAL REVIEW BEFORE PRODUCTION BEGINS.</p> <p>19. OO-ALC/LILE SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT MRB'S PRIOR TO SHIPMENT OF DISCREPANT ITEM. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE WILL BE SUBMITTED FOR MRB DISPOSITION.</p> <p>20. PRIOR TO CONTRACT AWARD, THE CONTRACTOR WILL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENTS/ASSEMBLIES. THE CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE THESE COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO THIS OFFICE OO-ALC/LILE.</p>			
PREPARED BY JOAN HYATT		SYMBOL LGMPM	DATE 26 Jun 02

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-127-5785
NOUN: CYLINDER, NLG

PART NUMBER (P/N) 14-41607-3
AIRCRAFT: F-5

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 14-41607 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-127-5785
NOUN: CYLINDER, NLG

PART NUMBER (P/N) 14-41607-3
AIRCRAFT: F-5

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$2000.00.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF <div style="text-align: center; margin: 10px 0;"> PISTON, STRUT F-5 </div>		
2. PART NUMBER <div style="text-align: center; margin-top: 10px;"> 14-40605-9 </div>	3. NATIONAL STOCK NUMBER <div style="text-align: center; margin-top: 10px;"> 1620-00-007-1781 </div>	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. OO-ALC/LGHLEN System Engineering retains all right to review and accept/reject MRB's prior to shipment of discrepant items. All deviations, minor and major, from the Engineering Drawing Package will be submitted for MRB disposition.		
6. Prior to contract award, the contractor will certify to the government in writing, full compliance with manuals, specifications, and standards called out and required for the manufacture of this contracted landing gear component/assembly. Contractor is responsible to completely search these manuals, specifications, and standards and fully understand the requirements necessary to manufacture landing gear components. Any questions can be forwarded to this office OO-ALC/LGHLEN.		
7. Surface Roughness per ASME B46.1.		
8. Identification and Marking per MIL-STD-130, impression stamping not permitted, in lieu of PS IM-23.		
9. Threads per MIL-S-7742, Safety Critical, in lieu of PS FH-32.		
10. Machine using Best Aircraft Industry Shop Practices in lieu of PS MA-116.		
11. Perform Magnetic Particle Inspection per ASTM E 1444, in lieu of PS IT-61. Use Type Full Wave Direct Current (FWDC), Wet Continuous Method, fluorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The Inspector performing the Inspection will be certified to the Level II with the Inspection Procedure developed by a Level III as specified in NAS-410.		
12. Shot Peen per SAE AMS 13165 all external surfaces except threads and internal surfaces marked per note #8 after machining, grinding, and stress relief but before plating in lieu of PS MA-57.		
13. Heat Treat per MIL-H-6875 in lieu of HT-15.		
14. On Parts Heat Treated 180 KSI and above, any surfaces Ground/Machined after Heat Treat will be inspected for abusive grinding/machine Burns Per MIL-STD-867. Grinding shall be per MIL-STD-866.		
15. Cadmium Plate per MIL-STD-870, Class 1, Type II in lieu of STF 0180.		
16. Apply one coat Epoxy Waterborne Primer per MIL-P-85582, Class 2, Type I in lieu of STF 0221. Alternate primer, one coat Epoxy - Polyamide per MIL-P-23377, Type I.		
17. Apply two top coats Polyurethane per MIL-PRF-85285, Type I, color #17925 (White) per FED-STD-595 in lieu of STF 0195.		
18. Chromium Plate per MIL-STD-1501, Type II Class 2, in lieu of STF 0352.		
19. Apply Corrosion Preventative Compound per MIL-C-16173, Grade 2, in lieu of STF 0144.		
PREPARED BY <div style="text-align: center; margin-top: 10px;"> SANDI L. FIELD </div>	SYMBOL <div style="text-align: center; margin-top: 10px;"> LGMPM </div>	DATE <div style="text-align: center; margin-top: 10px;"> 20030418 </div>

REV:	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")									
PART NUMBER	14-40605-9	NATIONAL STOCK NUMBER 1620-00-007-1781								
<p>20. Protect with FED-STD-242 prior to packaging for shipment in lieu of FED-STD-163.</p> <p>21. Use SAE AMS 6257 or SAE AMS 6419 for 300 M Steel.</p> <p>22. Serial Number shall be Vibropeened, or Steel Stamped, in 0.09" LETTERS 0.004" - 0.007" Deep in the location indicated. If the Drawing does not indicate a Location, OO-ALC/LGHLEN shall provide S/N Location Instructions. Serialization of item shall be accomplished as follows:</p> <p style="padding-left: 40px;">The Serialization shall begin with the CAGE (FSCM) of the Contractor named on the Contract, followed by a Dash and the 2 Digit year of Manufacture, followed by a dash and a sequentially unique 3 digit number. A Contractor who receives numerous intermittent contracts shall start Serialization of item with the next number in Sequence of the prior Contract. If a Contract produces more then 999 items, the Serial Number should begin using 4 Digit Serial Numbers. The Serial Number should appear like this: "S/N 98747-03-001".</p> <p>23. FORGING REQUIREMENTS;</p> <p style="padding-left: 40px;">A. The required forging will be procured from the qualified forging source using the original forging procedures and dies/tooling.</p> <p style="padding-left: 80px;">1. Prior to contract award the detailed part bidder will provide certification, from the forging source, to the government that the certified dies and forging procedures are available and the forging source has an agreement with the detail part bidder to provide forgings for their use in the event they are the successful bidder.</p> <p style="padding-left: 80px;">2. Prior to production, forging lot qualification will be accomplished as specified on the forging drawing and MIL-F-7190 (Steel) in lieu of NAI-1271. The contractor will assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment to the government.</p> <p style="padding-left: 40px;">B. FORGING SOURCE, CONTROL AND LOCATION OF DIES:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 40%;">1. Forging drawing</td> <td>14-40605-9</td> </tr> <tr> <td style="padding-left: 20px;">Die Number:</td> <td>7802</td> </tr> <tr> <td>2. Control of Forging Processes:</td> <td>Northrop</td> </tr> <tr> <td>3. Location of Forging Dies:</td> <td>Kropp Forge 5301 W. Roosevelt Rd Cicero, Ill 60804</td> </tr> </table>			1. Forging drawing	14-40605-9	Die Number:	7802	2. Control of Forging Processes:	Northrop	3. Location of Forging Dies:	Kropp Forge 5301 W. Roosevelt Rd Cicero, Ill 60804
1. Forging drawing	14-40605-9									
Die Number:	7802									
2. Control of Forging Processes:	Northrop									
3. Location of Forging Dies:	Kropp Forge 5301 W. Roosevelt Rd Cicero, Ill 60804									
PREPARED BY	SYMBOL	DATE								
SANDI L. FIELD	LGMPM	20030418								

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-007-1781
NOUN: Piston, Strut MLG

PART NUMBER (P/N) 14-40605-9
AIRCRAFT: F-5

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 14-40605-9 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-007-1781
NOUN: Piston, Strut MLG

PART NUMBER (P/N) 14-40605-9
AIRCRAFT: F-5

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$2,000.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

ENGINEERING DATA LIST

REVISION: 11

* HISTORY *

DATE: 06MAY03	DATA TECH: SSF	ORGN SYMBOL: LGMPM	PR NR:	APPLICATION: T-38	PAGE 1 OF 1		
CAGE: 98747	MANUFACTURER NAME: OGDEN AIR LOGISTICS CENTER OGDEN		REFERENCE NR: 7227218-10	NOUN: CYLINDER AND PISTON	NSN: 1620002640745LE		
CAGE	DRAWING NUMBER	REV	NR SHEETS	NR CARDS	FURN CODE	NOUN	REQUIREMENTS
98747	00-ALC/LGMPM	/	B 0001	0000	S	ENGR DATA RQMTS (ATTACH A)	
76823	3-40512	/	G 0001	0000	S	BUSHING, SLEEVE-FLANGED	
	/91C442						ECO
76823	3-40516	/	H 0001	0000	S	BUSHING, FLANGED	
76823	3-40521	/	E 0001	0000	S	BUSHING	
76823	3-40528	/	L 0001	0000	S	MARKINGS	
76823	6-41602	/	K 0002	0000	S	CYLINDER	
	/2-C-346						ADCN
	/92C1015						ECO
76823	6-41668	/	B 0001	0000	S	BUSHINGS, SLEEVE	
	/83C308						ECO
	/92C947						ECO
76823	6-41685	/	C 0001	0000	S	BUSHING, FLANGED	
98747	7227218	/	A 0001	0000	S	CYLINDER ASSY	
76823	9756-17	/	AF 0001	0000	S	BUSHING, TORQUE	

STANDARD ENGINEERING TEXT

ALL GOVERNMENT/MILITARY SPECIFICATIONS AND STANDARDS WILL NOT BE FURNISHED.
TO OBTAIN THESE SPECS AND STDS WRITE TO:

DODSSP
BUILDING 4/SECTION D
700 ROBINS AVE.
PHILADELPHIA PA. 19111-5098
TELEPHONE: (215) 697-2179
FAX: (215) 697-1462

TO VIEW OR ORDER: HTTP://WWW.DODSSP.DAPS.MIL

ENGINEERING DATA LIST REMARKS

FURNISHED METHOD CODE LEGEND:
X - DATA SUPPLIED (NOT IN EDCARS). G - GOV'T DOCUMENT.
C - CLASSIFIED DOCUMENT. R - FURNISHED BY PCD UPON REQUEST. O - OTHERS, CONTRACTOR
S - FURNISHED WITH SOLICITATION. P - PARTIAL DOCUMENT FURNISHED. MUST ACQUIRE.
M - OTHER DATA FURNISHED

REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF <div style="text-align: center; margin: 10px 0;">CYLINDER ASSY, NLG</div>		
2. PART NUMBER <div style="text-align: center;">7227218-10</div>	3. NATIONAL STOCK NUMBER <div style="text-align: center;">1620-00-264-0745 LE</div>	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. Identify Per MIL-STD-130 in lieu of IM-8 and MA-19.1.		
6. Threading Per SAE AS-8879 in lieu of FH-32.		
7. Install Bushings per the following in lieu of CP-4 and FH-19.		
<p>A. The bushing installations shall be accomplished in such a manner as to avoid damage to the finish on the I.D. of the Housing into which the Bushing is installed, or the Finish of the Bushing. Forced installation of Sub-Zero installations, such as the use of a Press or Hammer in not permitted, and IS NOT acceptable. A small Non-Metallic Hammer may be used to tap the Bushing into alignment with the Housing Bore, or to seat the Bushing.</p> <p>B. Prior to Bushing Installation, the Parts and Housing Bore shall be cleaned with a cleaning solvent to remove all contamination.</p> <p>C. Liquid Nitrogen shall be used for all Sub-Zero installations unless some other Sub-Zero Coolant is specified, and approved by OO-ALC/LGHLEN Engineering. The soak time of the Bushing in the Liquid Nitrogen shall be sufficient to allow the Bushing to reach the same temperature as the Coolant.</p> <p>D. The Bushing shall be installed into the Housing immediately upon removal from the Coolant with an absolute minimum of lost time. Trial runs shall be accomplished as necessary to minimize installation time which should be in the order of about seven (7) seconds maximum.</p> <p>E. It may occasionally be necessary to heat the Housing into which the Bushing is to be installed, in addition to Sub-Zero Cooling of the Bushing. Detail parts in process, which do not have Paint or Sealant or other Organic Material applied prior to heating, the parts shall be Heated by the use of Radiant Heat Techniques, such as Thermal Blankets, Infrared Lamps, ETC.: to the maximum temperature of 250 F. The temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No Scaling, Oxidation, or Corrosion shall be permitted.</p> <p>F. Bushings without Flanges shall be installed into Housing Bore which has received a Light Coat of Sealant per MIL-PRF-81733. Install Shrunk Bushing and wipe off any Excess Sealant that may have Extruded around the Periphery of both ends of the Bushing.</p> <p>G. Bushings with Flanges shall be installed in a similar manner as paragraph (F) except sealant shall also be applied to Face or Lug under Flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside face of Bushing Flange when Bushing is installed. Wipe off any excess Sealant around Periphery of Bushing Flange forming a Bead. Wipe any excess Sealant from other end of Bushing also.</p> <p>H. For Bushings with External Grease Grooves, the inside of the Lug will be coated with MIL-C-16173 prior Bushing installation and Face of Lug will be coated with MIL-PRF-81733 per paragraph G, If Bushing is Flanged.</p>		
PREPARED BY <div style="text-align: center;">SANDI L. FIELD</div>	SYMBOL <div style="text-align: center;">LGMPM</div>	DATE <div style="text-align: center;">20020508</div>

REV:	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 7227218-10	NATIONAL STOCK NUMBER 1620-00-264-0745 LE	
<p>8. Shot Peen per SAE AMS-S-13165 in Lieu of MP-207.</p> <p>9. Ultrasonic Inspection per SAE AMS-STD-2154 Type 1 class A, in lieu of IT-32.5.</p> <p>10. Sulfuric Anodize per SAE AMS-A-8625 Type II, Class 1 in lieu of FP-59 and NFS-76.</p> <p>11. For Drawing 6-41602:</p> <p style="padding-left: 40px;">A. In lieu of Finish SPEC NFS-76, Finish per the following:</p> <p style="padding-left: 80px;">1. Apply ONE coat epoxy Waterborne primer per MIL-PRF-85582, Type 1, Class 2. Alternate Primer, ONE coat EPOXY-PLOYAMIDE per MIL-PRF-23377, Type 1.</p> <p style="padding-left: 80px;">2. Apply TWO TOPCOATS of POLYURETHANE per MIL-PRF-85285, Type I COLOR # 17925 (WHITE) per FED-STD-595.</p> <p style="padding-left: 40px;">B. In lieu of TT-L-32 and FP-81, use A-A-3165, COLOR # 17038 (BLACK) per FED-STD-595.</p> <p>12. Perform Magnetic Particle Inspection per ASTM E 1444, in lieu of IT-32.3. Use Type Full Wave Direct Current (FWDC), Wet Continuous Method, fluorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The Inspector performing the Inspection will be certified to the Level II with the Inspection Procedure developed by a Level III as specified in NAS-410.</p> <p>13. Perform Fluorescent penetrant inspection per ASTM E 1417, Type I, Method B or C, Level 3 or 4 in lieu of IT-32.1 with the following Acceptance/Rejection Criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required Sensitivity Level and there shall be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedure developed by a Level III as specified in NAS-410.</p> <p>14. Application of Sealing, Locking, and Retaining Compounds Use MIL-R-46082, Type II in lieu of MA-103.</p> <p>15. Heat Treat per SAE AMS-H-6875 in lieu of HT-3.</p> <p>16. Heat Treat for Beryllium Copper per SAE AMS-H-7199 in Lieu of HT-9.2.</p> <p>17. Heat Treat per SAE AMS-H-6088, T73 Cond in lieu of HT-1.</p> <p>18. Cadmium Plate per SAE AMS-QQ-P-416. Type II, Class 2 in lieu of FP-2.</p> <p>19. Drawing 3-40516, P110-1 is not required.</p>		
PREPARED BY SANDI L. FIELD	SYMBOL LGMPM	DATE 20030508

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 7227218-10 '	NATIONAL STOCK NUMBER 1620-00-264-0745 LE	
<p>24. OO-ALC/LGHLEN System Engineer retains all rights to review and accept Material Review Boards (MRB's) prior to shipment of Discrepant Items. All Deviations, Minor and Major, from the Engineering Drawing Package will be submitted for MRB Disposition.</p> <p>25. Prior to Contract Award, the Contractor will Certify to the Government in writing full compliance with Manuals, Specifications, and Standards called out and required for the Manufacture of this Contracted Landing Gear Component/Assembly. Contractor is responsible to completely search these Manuals, Specifications, and Standards and fully understand the requirements necessary to manufacture Landing Gear Components. Any questions can be forwarded to OO-ALC/LGHLEN.</p> <p>26. Serial Number shall be Vibropeened, or Steel Stamped, in 0.09" LETTERS 0.004" - 0.007" Deep in the location indicated. If the Drawing does not indicate a Location, OO-ALC/LGHLEN shall provide S/N Location Instructions. Serialization of item shall be accomplished as follows:</p> <p>The Serialization shall begin with the CAGE (FSCM) of the Contractor named on the Contract, followed by a Dash and the 2 Digit year of Manufacture, followed by a dash and a sequentially unique 3 digit number. A Contractor who receives numerous intermittent contracts shall start Serialization of item with the next number in Sequence of the prior Contract. If a Contract produces more than 999 items, the Serial Number should begin using 4 Digit Serial Numbers. The Serial Number should appear like this: "S/N 98747-03-001".</p>		
PREPARED BY SANDI L. FIELD	SYMBOL LGMPM	DATE 20030508

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-264-0745LE
NOUN: Cylinder Assy - NLG

PART NUMBER (P/N) 7227218-10
AIRCRAFT: T-38 & F-5 (A/B)

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 7227218-10 and specification MIL-A-22771. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-00-264-0745LE

PART NUMBER (P/N)7227218-10

NOUN: Cylinder Assy - NLG

AIRCRAFT: T-38 & F-5 (A/B)

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$1500.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF <div style="text-align: center; margin: 10px 0;">PISTON, NLG ASSY OF</div>		
2. PART NUMBER <div style="text-align: center; margin-top: 10px;">3-41606-3</div>	3. NATIONAL STOCK NUMBER <div style="text-align: center; margin-top: 10px;">1620-00-949-0417 LE</div>	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. Markings and Identification per MIL-STD-130 in lieu of IM-8 and MA-19.9.		
6. Safety Procedures Per NASM20995 and NASM33540 in Lieu of FH-12.		
7. Install Bolts, Screw, Washers, Pins, Etc. per best shop procedure in Lieu of FH-11 and FH-12.		
8. Aircraft lubricant per MIL-HDBK-838 in Lieu of L-3.		
9. Surface Roughness per ANSI B46.1 in Lieu of MIL-STD-10.		
10. Cadmium Plate per SAE-AMS-QQ-P-416A Type II, Class 3 in Lieu of FP-2.		
11. Heat Treat per SAE AMS-H6875 in Lieu of HT-3.2.		
12. Solid Film Lubricant per MIL-L-46010 Type 1 or MIL-L-23398 in Lieu of MAI1115 and L-6.		
13. Threads per MIL-S8879, Safety Critical, in Lieu of FH-32.		
14. Perform Magnetic Particle inspection per ASTM E 1444 in Lieu of MIL-I-6868. Use full wave direct current (FWDC). Wet continuous method, Fluorescent Type with the following acceptance/rejection Criteria: <u>NO DEFECTS ALLOWED</u> . The intent of <u>NO DEFECTS ALLOWED</u> is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedure developed by a level III as specified in NAS-410.		
15. Perform Fluorescent penetrant inspection per ASTM E 1417, Type I, Method B or C, Level 3 or 4 in lieu of MIL-I-6866 with the following Acceptance/Rejection Criteria: <u>NO DEFECTS ALLOWED</u> . The intent of <u>NO DEFECTS ALLOWED</u> is that the inspection is conducted at the required Sensitivity Level and there shall be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedure developed by a Level III as specified in NAS-410.		
16. Chrome Plate Per MIL-STD-1907. Type 1 Class 2 in Lieu of FP-6.1.		
17. Shot Peen per SAE AMS-S-13165 in Lieu of MA-57.		
18. After contract award, the successful bidder shall provide a copy of the processing documentation (Routing Documents and Process Specifications) To LGHLEN for Final Review before production begins.		
19. OO-ALC/LGHLEN System Engineering retains all right to review and accept Material Review Board (MRB's) Dispositions prior to shipment of Discrepant item. All Deviations, Minor and Major, From the Engineering Drawing Package shall be submitted for MRB Disposition.		
PREPARED BY <div style="text-align: center; margin-top: 10px;">SANDI L. FIELD</div>	SYMBOL <div style="text-align: center; margin-top: 10px;">LGMPM</div>	DATE <div style="text-align: center; margin-top: 10px;">20030210</div>

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 3-41606-3	NATIONAL STOCK NUMBER 1620-00-949-0417 LE	
<p>20. Prior to contract award, the Contractor shall certify to the Government in writing full compliance with Manuals, Specifications and Standards called out and required for the Manufacture of this contracted landing Gear Component/Assembly. Contractor is responsible to completely search these Manuals, Specifications and Standards and fully understand the requirements necessary to manufacture Landing Gear Components. Any Questions can be forwarded to OO-ALC/LGHLE.</p> <p>21. Apply a Thin Uniform Coating of Primer per MIL-PRF-23377 or MIL-PRF-85582 (After CADMIUM PLATING) to all Bushing Bores and allow to fully cure prior to installation of Bushing (Primer Shall Not Obstruct Grease Passages).</p> <p>22. Per Flag Note 8, Drawing 2007302, install bushings per the following in Lieu of MM5743:</p> <p style="margin-left: 40px;">A. The Bushing Installations shall e accomplished in such a manner as to avoid damage to the finish on the I.D. of the Housing into which the bushing is installed, or the finish of the bushing. Forced installation of Sub-Zero installations, such as the use of a press or hammer is not permitted, and is not acceptable. A small non-metallic Hammer may be used to tap the bushing into alignment with the housing bore, or to seat the bushing.</p> <p style="margin-left: 40px;">B. Prior to Bushing installation, the parts and housing bore shall be cleaned with a cleaning solvent to remove all contamination.</p> <p style="margin-left: 40px;">C. Liquid Nitrogen shall be used for all Sub-Zero installations unless some other Sub-Zero coolant is specified and approved by OO-ALC/LGHLEN Engeering. The soak time of the bushing in the Liquid Nitrogen shall be Sufficient to allow the bushing to reach the same temperature as the coolant.</p> <p style="margin-left: 40px;">D. The Bushing shall be installed into the housing immediately upon removal from the coolant with an absolute minimum of lost time. Trail runs shall be accomplished as necessary to minimize installation time which should be in order of about seven (7) seconds maximum.</p> <p style="margin-left: 40px;">E. It may occasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process will not have Paint, Sealant or other Organic Material Applied prior to Heating. The parts shall be heated by the use of Radiant Heat Techniques, such as Thermal Blankets, Infrared Lamps ETC.; To the maximum temperature of 250F. Temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling, oxidation or corrosion shall be permitted.</p> <p style="margin-left: 40px;">F. Bushings without Flanges shall be installed into Housing Bore which has received a light coat of Sealant per MIL-PRF-81733. Install shrunken bushing and wipe off any excess sealant that may have extruded around the periphery of Both Ends of the Bushing.</p> <p style="margin-left: 40px;">G. Bushings with Flanges shall be installed in a similar Manner as paragrahp (F) except Sealant shall also be applied to Face of Lug under Flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside faace of bushing flange when bushing is installed. Wipe off any excess sealant around periphery of bushing flange. Wipe off any excess sealant from other end of bushing also.</p> <p style="margin-left: 40px;">H. For Bushings with external Grease Grooves, the inside of the Lug will be coated with MIL-C-16173 prior to bushing installation and face of Lug will be coated with MIL=PRF-81733 per paragraph G, if bushing is flanged.</p>		
PREPARED BY SANDI L. FIELD	SYMBOL LGMPM	DATE 20030210

REV:		ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 3-41606-3		NATIONAL STOCK NUMBER 1620-00-949-0417 LE	
<p>23. For Parts Heat-Treated to 180 KSI and above, any Surface Ground/Machined after Heat Treat shall be inspected for abusive grinding/machining Burns per MIL-STD-867. Grinding shall be per MIL-STD-866.</p> <p>24. The Forging Shall be procured from the Original Forging Source, using the Original Certified Forging Procedures and Dies/Tooling.</p> <p>A. Prior to Contract Award, The Detailed Part Bidder shall provide Certification from the Forging Source, to the Government that the Certified Dies and Procedures are available and the Forging Source has an agreement with the Detail Parts Bidder to provide Forgings for their use in the event they are the successful Bidder.</p> <p>B. Prior to Production, Forging Lot Qualification shall be accomplished as specified on the Forging Drawing and SAE AMS-F-7190 for Steel Forgings and Sae AMS-A-22771 for Aluminum Forgings. The Detailed Part Contractor Shall assure that this has been accomplished by the forging source and shall submit certified documentation of accomplishment to the Government.</p> <p>25. Forging Source, Control and Location of Dies:</p> <p>Forging Drawings: 3-41606-1F ABD 3-41605-11F.</p> <p>Die# : Unknown and 7874</p> <p>Control Of Forging Process: Northrop</p> <p>Location of Forging Dies:</p> <p>KROPP FORGE COMPANY 5301 W. Roosevelt Road CICERO, IL 60650-1273 PHONE: (708) 652-6691 CAGE: OBFN1</p> <p>26. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL ADVISE THE GOVERNMENT IN WRITING OF THE INTENT TO PROCURE NEW FORGING DIES AND THE PROPOSED FORGING SOURCE: THE CONTRACTOR SHALL NOT PROCEED TO OBTAIN NEW FORGING DIES WITHOUT THE EXPRESS WRITTEN CONSENT OF THE GOVERNMENT PROCURING ACTIVITY. THE GOVERNMENT SHALL HAVE UNLIMITED USE OF THE DIES DEVELOPED UNDER THIS CONTRACT. THE CONTRACTOR SHALL INFORM THE FORGING HOUSE IN WRITING, AT THE SAME TIME THE ORDER FOR THE DIES IS PLACED, THAT THE GOVERNMENT HAS UNLIMITED USE RIGHTS OF THE DIES AND FORWARD A COPY OF THIS LETTER TO THE GOVERNMENT CONTRACTING OFFICER.</p>			
PREPARED BY SANDI L. FIELD		SYMBOL LGMPM	DATE 20030210

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-949-0417LE
NOUN: Piston, NLG

PART NUMBER (P/N) 3-41606-3
AIRCRAFT: T-38

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 3-41606-3 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS
(PI.98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-949-0417LE
NOUN: Piston, NLG

PART NUMBER (P/N) 3-41606-3
AIRCRAFT: T-38

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$1500.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority LGHLEN can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHLEN reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

ENGINEERING DATA LIST

REVISION: 03

* HISTORY *

DATE : 13MAY03	DATA TECH : SSF	ORGN SYMBOL : LGMPM	PR NR :	APPLICATION: T-38	PAGE 1 OF 1			
CAGE: 98747	MANUFACTURER NAME: OGDEN AIR LOGISTICS CENTER OGDEN		REFERENCE NR: 7227216-10	NOUN : CYLINDER AND PISTON	NSN : 1620002640750LE			
CAGE	DRAWING NUMBER	REV	NR SHEETS	NR CARDS	FURN CODE	DIST CODE	NOUN	REQUIREMENTS
98747	OO-ALC/LGMPM	/	A 0004	0000	X		ENGR. DATA RMTS. ATTACHMENT "A"	
76823	6-40602	/	P 0000	0000	S		CYLINDER - MLG	
	/2-C-347							DCN
	/4-C-28							DCN
	/80C030							ECO
	/81C154							ECO
76823	6-40622	/	D 0000	0000	S		BUSHING	
	/90C076							ECO
76823	6-40632	/	B 0000	0000	S		BUSHING	
76823	6-40637	/	D 0000	0000	S		BUSHING	
	/82C293							ECO
76823	6-40638	/	D 0000	0000	S		BUSHING	
	/F04354							
76823	6-40691	/	C 0000	0000	S		BUSHING	
98747	7227216	/	A 0000	0000	S		CYLINDER ASSY-MLG	
76823	9757E-31	/	AD 0000	0000	S		BUSHING - AFT TRUNNION MLG	

STANDARD ENGINEERING TEXT

ALL GOVERNMENT/MILITARY SPECIFICATIONS AND STANDARDS WILL NOT BE FURNISHED.
TO OBTAIN THESE SPECS AND STDS WRITE TO:

DODSSP
BUILDING 4/SECTION D
700 ROBINS AVE.
PHILADELPHIA PA. 19111-5098
TELEPHONE: (215) 697-2179
FAX: (215) 697-1462

TO VIEW OR ORDER: HTTP://WWW.DODSSP.DAPS.MIL

ENGINEERING DATA LIST REMARKS

FURNISHED METHOD CODE LEGEND:
C - CLASSIFIED DOCUMENT.
S - FURNISHED WITH SOLICITATION.
M - STABLE BASE DRAWING REQUIRED;
X - DATA SUPPLIED (NOT IN EDCARS).
R - FURNISHED BY PCD UPON REQUEST.
P - PARTIAL DOCUMENT FURNISHED.
V - VENDOR DRAWING;
G - GOV'T DOCUMENT.
O - OTHERS, CONTRACTOR MUST ACQUIRE.
A - DATA MISC.

REV:

ENGINEERING DATA REQUIREMENTS

(ATTACHMENT "A")

NOTE: MILITARY SPECIFICATIONS /STANDARDS WILL NOT BE FURNISHED IN THE BID SET.

1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF

CYLINDER ASSY, NLG

2. PART NUMBER

7227216-10

3. NATIONAL STOCK NUMBER

1620-00-264-0750 LE

4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.

DRAWING 7227216-10 S/S's DRAWING 6-40602-7 (9) IN PART.

5. Identify Per MIL-STD-130 in lieu of IM-8 and MA-19.1.
6. Threading Per SAE AS-8879, Safety Critical, in lieu of FH-32.
7. Install Bushings with Lockite Process per the following in lieu of FH-19 and MA-103.

A. The Bushing Installations shall be accomplished in such a manner as to avoid damage to the finish on the I.D. of the Housing into which the Bushing is installed, or the Finish of the Bushing. Forced installation of Sub-Zero installations, such as the use of a Press or Hammer is not permitted, and IS NOT acceptable. A small Non-Metallic Hammer may be used to tap the Bushing into alignment with the Housing Bore, or to Seat the Bushing.

B. Prior to Bushing Installation, the Parts and Housing Bore shall be cleaned with a cleaning solvent to remove all contamination.

C. Liquid Nitrogen shall be used for all Sub-Zero installations unless some other Sub-Zero Coolant is specified, and approved by OO-ALC/LGHLEN Engineering. The soak time of the Bushing in the Liquid Nitrogen shall be sufficient to allow the Bushing to reach the same temperature as the Coolant.

D. The Bushing shall be installed into the Housing immediately upon removal from the Coolant with an absolute minimum of lost time. Trial runs shall be accomplished as necessary to minimize installation time which should be in the order of about seven (7) seconds maximum.

E. It may occasionally be necessary to heat the Housing into which the Bushing is to be installed, in addition to Sub-Zero Cooling of the Bushing. Detail parts in process, which do not have Paint or Sealant or other Organic Material applied prior to heating, the parts shall be Heated by the use of Radiant Heat Techniques, such as Thermal Blankets, Infrared Lamps, ETC.: to the maximum temperature of 250 F. The temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No Scaling, Oxidation, or Corrosion shall be permitted.

F. Bushings without Flanges shall be installed into Housing Bore which has received a Light Coat of Sealant per MIL-PRF-81733. Install Shrunk Bushing and wipe off any Excess Sealant that may have Extruded around the Periphery of both ends of the Bushing.

G. Bushings with Flanges shall be installed in a similar manner as paragraph (F) except sealant shall also be applied to Face or Lug under Flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside face of Bushing Flange when Bushing is installed. Wipe off any excess Sealant around Periphery of Bushing Flange forming a Bead. Wipe any excess Sealant from other end of Bushing also.

H. For Bushings with External Grease Grooves, the inside of the Lug will be coated with MIL-C-16173 prior Bushing installation and Face of Lug will be coated with MIL-PRF-81733 per paragraph G, If Bushing is Flanged.

PREPARED BY

SANDI L. FIELD

SYMBOL

LGMPM

DATE

20020613

REV:		ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 7227216-10		NATIONAL STOCK NUMBER 1620-00-264-0750 LE	
<p>8. Shot Peen per SAE AMS-S-13165 in Lieu of MP-207.</p> <p>9. Ultrasonic Inspection per SAE AMS-STD-2154 Type 1 class A, in lieu of IT-32.5.</p> <p>10. Sulfuric Anodize per SAE AMS-A-8625 Type II, Class 1 in lieu of FP-3.</p> <p>11. Perform Magnetic Particle Inspection per ASTM E 1444, in lieu of IT-32.3. Use Type Full Wave Direct Current (FWDC), Wet Continuous Method, fluorescent type with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The Inspector performing the Inspection will be certified to the Level II with the Inspection Procedure developed by a Level III as specified in NAS-410.</p> <p>12. Perform Fluorescent penetrant inspection per ASTM E 1417, Type I, Method B or C, Level 3 or 4 in lieu of IT-32.1 with the following Acceptance/Rejection Criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required Sensitivity Level and there shall be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedure developed by a Level III as specified in NAS-410.</p> <p>13. Application of Sealing, Locking, and Retaining Compounds Use MIL-R-46082(IN4D), Type II in lieu of MA-103.</p> <p>14. Heat Treat per SAE AMS-H-6875 in lieu of HT-3.4.</p> <p>15. Heat Treat for Beryllium Copper per SAE AMS-H-7199 in Lieu of HT-9.2.</p> <p>16. Heat Treat per SAE AMS-H-6088, in lieu of HT-1.</p> <p>17. Cadmium Plate per SAE AMS-QQ-P-416. Type II, Class 2 in lieu of FP-2.</p> <p>18. MATERIAL SPECIFICATION QQ-A-268 has been S/S by SAE AMS-QQ-A-225/6A</p> <p>A. Apply Finish Paint System per the following:</p> <ol style="list-style-type: none"> 1. One coat epoxy primer per MIL-PRE-23377. 2. Two coats topcoat per MIL-PRF-85285, colow: White #17925 per Fed-Std-595. <p>B. The following paint system may be applied as an alternate coating for environmental reasons.</p> <ol style="list-style-type: none"> 1. One Coat Epoxy Primer, waterborne per MIL-PRF-85582, Type I, Class 2. 2. Two Coats Topcoat per MIL-PRF-85285, Type I, Color: White #17925 per FED-STD-595. <p>19. Surface roughness per ASME B46.1, in lieu of ANSI B46.1</p>			
PREPARED BY SANDI L. FIELD		SYMBOL LGMPM	DATE 20030613

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 7227216-10	NATIONAL STOCK NUMBER 1620-00-264-0750 LE	
<p>20. The Forging Shall be procured from the Original Forging Source, using the Original Certified Forging Procedures and Dies/Tooling.</p> <p style="margin-left: 40px;">A. Prior to Contract Award, The Detailed Part Bidder shall provide Certification from the Forging Source, to the Government that the Certified Dies and Procedures are available and the Forging Source has an agreement with the Detail Parts Bidder to provide Forgings for their use in the event they are the successful Bidder.</p> <p style="margin-left: 40px;">B. Prior to Production, Forging Lot Qualification shall be accomplished as specified on the Forging Drawing and SAE AMS-A-22771 for Aluminum Forgings. The Detailed Part Contractor Shall assure that this has been accomplished by the Forging Source and shall submit certified documentation of accomplishment to the Government.</p> <p>21. Forging Source, Control and Location of Dies:</p> <div style="margin-left: 40px;"> <p>A. Forging Drawings: 6-40602-11F</p> <p>B. Die Number: Unknown</p> <p>C. Control Of Forging Process: Northrop</p> <p>D. Location of Forging Dies: Unknown</p> </div> <p>22. INSTRUCTIONS FOR QUALIFICATION OF NEW FORGING SOURCE;</p> <p style="margin-left: 40px;">Prior to Contract Award, the Contractor WILL advise the Government in writing of their intent to procure new Forging Dies and the Proposed Forging Source. The contractor SHALL NOT proceed to obtain new Dies without the Express Consent of the Government Procuring Agency. The Contractor WILL request written instructions from OO-ALC/LGHLEN and the System Engineer for the Forging Die Qualification Requirements. The Government WILL have unlimited use of the Dies</p>		
PREPARED BY SANDI L. FIELD	SYMBOL LGMPM	DATE 20030613

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 7227216-10	NATIONAL STOCK NUMBER 1620-00-264-0750 LE	
<p>22. OO-ALC/LGHLEN System Engineer retains all rights to review and accept Material Review Boards (MRB's) prior to shipment of Discrepant Items. All Deviations, Minor and Major, from the Engineering Drawing Package will be submitted for MRB Disposition.</p> <p>23. Prior to Contract Award, the Contractor will Certify to the Government in writing full compliance with Manuals, Specifications, and Standards called out and required for the Manufacture of this Contracted Landing Gear Component/Assembly. Contractor is responsible to completely search these Manuals, Specifications, and Standards and fully understand the requirements necessary to manufacture Landing Gear Components. Any questions can be forwarded to OO-ALC/LGHLEN.</p> <p>24. Serial Number shall be Vibropeened, or Steel Stamped, in 0.09" LETTERS 0.004" - 0.007" Deep in the location indicated. If the Drawing does not indicate a Location, OO-ALC/LGHLEN shall provide S/N Location Instructions. Serialization of item shall be accomplished as follows: The Serialization shall begin with the CAGE (FSCM) of the Contractor named on the Contract, followed by a Dash and the 2 Digit year of Manufacture, followed by a dash and a sequentially unique 3 digit number. A Contractor who receives numerous intermittent contracts shall start Serialization of item with the next number in Sequence of the prior Contract. If a Contract produces more than 999 items, the Serial Number should begin using 4 Digit Serial Numbers. The Serial Number should appear like this: "S/N 98747-03-001".</p>		
PREPARED BY SANDI L. FIELD	SYMBOL LGMPM	DATE 20030613

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-00-264-0750LE
NOUN: Cylinder Assy - MLG

PART NUMBER (P/N)72272216-10
AIRCRAFT: T-38 & F-5 (A/B)

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 72272216-10 and specification MIL-A-22771. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS

(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-264-0750LE

PART NUMBER (P/N) 72272216-10

NOUN: Cylinder Assy - MLG

AIRCRAFT: T-38 & F-5 (A/B)

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$2000.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF <div style="text-align: center; font-weight: bold; padding: 10px 0;"> PISTON, STRUT ASSY, - MLG ASSY, OF </div>		
2. PART NUMBER <div style="text-align: center; font-weight: bold; padding: 10px 0;"> 4G11414-107A </div>	3. NATIONAL STOCK NUMBER <div style="text-align: center; font-weight: bold; padding: 10px 0;"> 1620 00 417 6249 LE </div>	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
<div style="margin-left: 20px;"> <p>a. Machine to meet drawing requirements per LAC 0701, in lieu of DS30003.</p> <p>b. Identify to meet drawing requirements and MIL-STD-130 with the following notes, in lieu of STP 63-001. Serial number shall be vibropeened, steel stamped, or rubber stamped, where needed in 0.09" letters 0.004" - 0.007" deep in the location indicated. If the drawing does not indicate a location, OO-ALC/LILE will provide S/N location instructions. Serialization of item shall be accomplished as follows: The serialization will begin with the CAGE of the contractor named on the contract, followed by a dash and the two (2) digit year of manufacture, followed by a dash and a sequentially unique three (3) digit number. A contractor who receives numerous intermittent contracts will start serialization of item with the next number in sequence of the prior contract. If a contract produces more than 1000 items, the serial number should appear like this: "S/N 98747-03-001"</p> <p>c. Heat treat per SAE AMS-H-6875, in lieu of STP 54-006.</p> <p>d. Penetrant inspect per ASTM E1417, Type I, Method B or C, Level 3 or 4, in lieu of STP 53-201. With the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The inspector performing the inspection shall be level II certified, with the inspection procedure developed by a level III as specified in NAS-410.</p> <p>e. Magnetic particle inspection per ASTM E1444, in lieu of MIL-I-6868. Use fluorescent type, full wave direct current (FWDC), and wet continuous method. With the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The inspector performing the inspection shall be level II certified, with the inspection procedure developed by a level III, as specified in NAS-410.</p> <p>f. Any surface ground/machined after heat treat, shall be inspected for burns per MIL-STD-867, in lieu of STP 54-006. Grinding shall be per MIL-STD-866.</p> <p>g. Shot peen to meet drawing requirements per SAE AMS-S-13165, in lieu of STP 51-501.</p> <p>h. Assemble wet with TT-P-1757, in lieu of MIL-P-8585.</p> <p>i. Cement using best aircraft industry standatds in lieu of STP 60-505. Use 3M Co. EC-2216 B/A adhesive. Install immediately after applying adhesive, in lieu of DS 30002. (Ref. Note 22 on drawing 4G13490)</p> <p>g. Dimessioning and tolerincing per ASME Y14.5M.</p> </div>		
PREPARED BY <div style="text-align: center; font-weight: bold; padding: 10px 0;"> ORIN HATCH </div>	SYMBOL <div style="text-align: center; font-weight: bold; padding: 10px 0;"> LGMPM </div>	DATE <div style="text-align: center; font-weight: bold; padding: 10px 0;"> 8 May 03 </div>

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER	NATIONAL STOCK NUMBER	
4G11414-107A	1620 00 417 6249 LE	
<p>5. Drilling, reaming, and honing to meet drawing specifications, using best shop procedures and the following notes in lieu of STP 51-410.</p> <ul style="list-style-type: none"> a. High speed steel (HSS) drills shall be used to drill corrosion resistant steels. b. HSS reamers will be used for rough reaming, and final reaming of steels heat treated below 200 KSI. Carbide or premium grade hi-speed tipped reamers will be used for rough reaming of steels heat treated above 200 KSI. c. Drilling shall never be used as a final machining operation. A minimum of 0.015 inch on diameter shall be left for final reaming. Holes shall be finished by reaming or boring. When jigs, fixtures, or bushings are not used for drilling holes larger than 1/4 inch, the holes will be piloted with a center drill. Chemical, electrical, or electrochemical hole producing methods shall not be used as a final surface producing method without prior approval from OO-ALC/LGHLEN. d. Honing stones shall be of 150 to 500 aluminum oxide grit with a medium-hard bond and preferably a multi-head stone. Heads with steel shoes or wipers shall not be used. e. Rough reaming, the reamer length shall be as short as consistent with required penetration. Final reaming, the diameter cut shall produce a hole that meets the requirements of the engineering drawing. f. Honing shall be used as a final operation where a surface finish better than 125 roughness height ratio is required, and cannot be produced by other means. g. Carbide drills can be operated at higher speeds than HSS drills, but must be used with caution. They must not be used in dull or chipped condition. <p>6. The following changes have been made in materials and specifications required.</p> <ul style="list-style-type: none"> a. Use Air Force drawing 9825011 as required, in lieu of AND10050. b. Use SAE AMS 5515, in lieu of AMS 5515. (Ref. drawing 4G13490-111) c. Use SAE AMS 4535, in lieu of QQ-C-530, and AMS 4535, If tubing is used. (Ref. 4G13774, and ECO 95C513) d. Use SAE AMS 4881, in lieu of SAE 4881. (Ref. drawing 4G13491) e. Use SAE AMS 6257, in lieu of STM 05-501. (Ref. drawing 4G11424) 		
PREPARED BY	SYMBOL	DATE
ORIN HATCH	LGMPM	8 May 03

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER	NATIONAL STOCK NUMBER	
4G11414-107A	1620 00 417 6249 LE	
<p>6. Finish per the following in lieu of DS 30000, and finish codes CC, C, D, M, and 17, 53, 54, 74-74.</p> <ul style="list-style-type: none"> a. Cadmium plate per MIL-STD-1500, Type II, Class 2. (code CC) (Ref. drawing 4G11414) b. Cadmium plate per MIL-STD-870, Type II, Class 2 or 3, to meet drawing requirements, in lieu of STP 58-020, and code C. (Ref. drawings 4G11414, 4G13490, and 4G13491) c. Chromium plate per MIL-STD-1501, Class 1, Type 1 or II, on I.D. (note 15) Class 2, Type II, on the O.D. (note 16) (code D) (Ref. drawing 4G11414) d. Passivate per SAE AMS QQ-P-35, Type optional. (code M) (Ref. drawing 4G13490) e. Primer wash is not required. (code 17) f. Corrosion inhibiting per MIL-PRF-46010. (code 53) (Ref. drawing 4G13490) g. One coat of epoxy primer per MIL-PRF-85582, Type I, Class 2. (code 54). Alternate, One coat of epoxy primer per MIL-PRF-23377, Type I. h. Two coats of top coat per MIL-PRF-85285, Type I. (color white, No. 17925 per FED-STD-595). (code 74-74) <p>7. Material Review Board disposition:</p> <ul style="list-style-type: none"> a. OO-ALC/LLGHLEN system engineering retains all rights to review and accept MRB dispositions prior to shipment of discrepant item. All deviations, minor and major, from the engineering drawing package will be submitted for MRB disposition. <p>8. The required forgings will be procured from the qualified forging source using the original certified forging procedures and dies.</p> <ul style="list-style-type: none"> a. Prior to contract award, the detail part bidder will provide certification, from the forging source to the government, that the certified dies and forging procedures are available and that the forging source has an agreement with the detail part bidder to provide forgings for his use in the event that he is the successful bidder. b. Prior to production, forging lot qualification will be accomplished as specified on the forging drawing, 4G52470 and SAE AMS-F-7190. (For steel forgings) The contractor will assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment to the government. 		
PREPARED BY	SYMBOL	DATE
ORIN HATCH	LGMPM	8 May 03

REV:		ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 4G11414-107A		NATIONAL STOCK NUMBER 1620 00 417 6249 LE	
<p>9. FORGING SOURCE, CONTROL AND LOCATION OF DIES:</p> <p>a. Forging drawing: Lockheed Mart. 4G11424-991A (CAGE 98897)</p> <p>b. Control of forging process: B.F.Goodrich. (CAGE 13002)</p> <p>c. Location of forging dies: Cameron Iron Works. (CAGE 10447)</p> <p>d. Die number: 73797</p> <p>e. Forging drawing: Lockheed Mart. 4G13774-991A (CAGE 98897)</p> <p>f. Control of forging process: B.F.Goodrich. (CAGE 13002)</p> <p>g. Location of forging dies: Brush Wellman Inc. (CAGE 055451)</p> <p>h. Die number: 82141</p> <p>10. The following specifications are not required for the manufacture of this item.</p> <p>a. Static test X999, and DS 5025.</p> <p>b. AGE CEI MRO151A, 4S51102, 4S51665, 4S51224, and CP40301.</p>			
PREPARED BY ORIN HATCH		SYMBOL LGMPM	DATE 8 May 03

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-417-6429LE
NOUN: PISTON ASSY. MLG

PART NUMBER (P/N) 4G11414-107A
AIRCRAFT: C-5

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offerer an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offerer.
2. The offerer must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offerer is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offerer will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawings, P/N 4G11424-991A and specification SAE AMS-F-7190, and P/N 4G13774-991A. The offerer shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-417-6429LE
NOUN: PISTON ASSY. MLG

PART NUMBER (P/N) 4G11414-107A
AIRCRAFT: C-5

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$2000

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LGHLE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHLE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

REV:	ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATIONS /STANDARDS WILL NOT BE FURNISHED IN THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF <div style="text-align: center; padding: 10px;"> OUTER CYLINDER ASSY - SHOCK STRUT, NOSE LANDING GEAR </div>		
2. PART NUMBER <div style="text-align: center;">975509-10</div>	3. NATIONAL STOCK NUMBER <div style="text-align: center;">1620-00-195-4810LE</div>	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.		
5. SHOT PEEN PER SAE AMS-S-13165 IN LIEU OF MIL-S-13165 PER DRAWING REQUIREMENTS.		
6. PERFORM FLUORESCENT PENETRANT INSPECTION PER ASTM E 1417, TYPE I, METHOD B OR C, LEVEL 3 OR 4 IN LIEU OF MIL-S-6866, WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED . THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.		
7. PER DRAWING 975509 USE MATERIAL SAE AMS 4111 IN LIEU OF AMS 4111.		
8. USE MIL-STD-7179 IN LIEU OF MIL-F-7179.		
9. APPLY ONE COAT EPOXY WATERBORNE PRIMER PER MIL-PRF-85582 , TYPE I, CLASS 2 IN LIEU OF MIL-P-85582 AND M85582-12. ALTERNATE ONE COAT OF EPOXY POLYAMIDE PRIMER PER MIL-PRF-23377 , TYPE I.		
10. APPLY TWO TOPCOATS POLYURETHANE PER MIL-PRF-85285 , TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595 IN LIEU OF MIL-C-85285 AND M85285-1.		
11. MARK AND IDENTIFY PER MIL-STD-130 IN LIEU OF BAC 5307, (P/N 63-2030-1).		
12. FOR FINISH CODE F-4.202, (DWG 63-2030), CADMIUM PLATE PER QQ-P-416 , CLASS 3, TYPE I.		
13. BAC 5005, BACD 2097 AND DWG 2-5000 ARE NOT REQUIRED FOR MANUFACTURE.		
14. INSTALL BUSHINGS PER THE FOLLOWING: <div style="margin-left: 20px; padding-left: 20px;"> <p>A. THE BUSHING INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE I.D. OF THE HOUSING INTO WHICH THE BUSHING IS INSTALLED, OR THE FINISH OF THE O.D. OF THE BUSHING. FORCED INSTALLATION OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A PRESS OR HAMMER IS NOT PERMITTED, AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER MAY BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING.</p> <p>B. PRIOR TO BUSHING INSTALLATION, THE PARTS AND HOUSING BORE SHALL BE CLEANED WITH A CLEANING SOLVENT TO REMOVE ALL CONTAMINATION.</p> <p>C. LIQUID NITROGEN SHALL BE USED FOR ALL SUB-ZERO INSTALLATIONS UNLESS SOME OTHER SUB-ZERO COOLANT IS SPECIFIED, AND APPROVED BY OO-ALC/LILEC ENGINEERING. THE SOAK TIME OF THE BUSHING IN THE LIQUID NITROGEN SHALL BE SUFFICIENT TO ALLOW THE BUSHING TO REACH THE SAME TEMPERATURE AS THE COOLANT.</p> </div>		
<h2 style="margin: 0;">"PROJECT RIGHTS GUARD"</h2>		
PREPARED BY <div style="text-align: center;">CAROL HYER</div>	SYMBOL <div style="text-align: center;">LGMPM</div>	DATE <div style="text-align: center;">22 Mar 02</div>

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 975509-10	NATIONAL STOCK NUMBER 1620-00-195-4810LE	
<p>D. THE BUSHING SHALL BE INSTALLED INTO THE HOUSING IMMEDIATELY UPON REMOVAL FROM THE COOLANT WITH AN ABSOLUTE MINIMUM OF LOST TIME. TRIAL RUNS SHALL BE ACCOMPLISHED AS NECESSARY TO MINIMIZE INSTALLATION TIME WHICH SHOULD BE IN THE ORDER OF ABOUT SEVEN (7) SECONDS MAXIMUM.</p> <p>E. IT MAY OCCASIONALLY BE NECESSARY TO HEAT THE HOUSING INTO WHICH THE BUSHING IS TO BE INSTALLED, IN ADDITION TO SUB-ZERO COOLING OF THE BUSHING. DETAIL PARTS IN PROCESS WILL NOT HAVE PAINT OR SEALANT OR OTHER ORGANIC MATERIAL APPLIED PRIOR TO HEATING, THE PARTS SHALL BE HEATED BY THE USE OF RADIANT HEAT TECHNIQUES, SUCH AS THERMAL BLANKETS, INFRARED LAMPS ETC.; TO THE MAXIMUM TEMPERATURE OF 250 F. TEMPERATURE MEASURING DEVICES SHALL BE USED TO MONITOR HEAT AND SHALL BE LOCATED ON AREAS OF THE PART EXPECTED TO REACH MAXIMUM TEMPERATURE. NO SCALING, OXIDATION, OR CORROSION SHALL BE PERMITTED.</p> <p>F. BUSHINGS WITHOUT FLANGES SHALL BE INSTALLED INTO HOUSING BORE WHICH HAS RECEIVED A LIGHT COAT OF SEALANT PER MIL-PRF-81733. INSTALL SHRUNKEN BUSHING AND WIPE OFF ANY EXCESS SEALANT THAT MAY HAVE EXTRUDED AROUND THE PERIPHERY OF BOTH ENDS OF THE BUSHINGS.</p> <p>G. BUSHINGS WITH FLANGES SHALL BE INSTALLED IN A SIMILAR MANNER AS PARAGRAPH (F) EXCEPT SEALANT SHALL ALSO BE APPLIED TO FACE OF LUG UNDER FLANGE. SEALANT SHALL BE APPLIED IN SUCH A MANNER AS TO ENSURE COMPLETE COVERAGE OF INSIDE FACE OF BUSHING FLANGE WHEN BUSHING IS INSTALLED. WIPE OFF ANY EXCESS SEALANT AROUND PERIPHERY OF BUSHING FLANGE. WIPE ANY EXCESS SEALANT FROM OTHER END OF BUSHING ALSO.</p> <p>H. FOR BUSHINGS WITH EXTERNAL GREASE GROOVES THE INSIDE OF THE LUG WILL BE COATED WITH MIL-C-16173 PRIOR TO BUSHING INSTALLATION AND FACE OF LUG WILL BE COATED WITH MIL-PRF-81733 PER PARAGRAPH G, IF BUSHING IS FLANGED.</p> <p>15. OO-ALC/LILE SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT MATERIAL REVIEW BOARD'S (MRB'S) DISPOSITIONS PRIOR TO SHIPMENT OF DISCREPANT ITEM. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE SHALL BE SUBMITTED FOR MRB DISPOSITION.</p> <p>16. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATION, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENT/ASSEMBLY. CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE LANDING GEAR COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO OO-ALC/LILE.</p> <p>17. AFTER CONTRACT AWARD, THE SUCCESSFUL BIDDER SHALL PROVIDE A COPY OF THE PROCESSING DOCUMENTATION (ROUTING DOCUMENTS AND PROCESS SPECIFICATIONS) TO LILE FOR FINAL REVIEW BEFORE PRODUCTION BEGINS.</p>		
<h1 style="margin: 0;">"PROJECT RIGHTS GUARD"</h1>		
PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 22 Mar 02

REV:	ENGINEERING DATA REQUIREMENT CONTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER 975509-10	NATIONAL STOCK NUMBER 1620-00-195-4810LE	
<p>18. SERIAL NUMBER SHALL BE VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL) IN 0.09" LETTERS 0.004" - 0.007" DEEP IN THE LOCATION INDICATED. IF THE DRAWING DOES NOT INDICATE A LOCATION, OO-ALC/LILE SHALL PROVIDE S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION SHALL BEGIN WITH THE CAGE OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES INTERMITTENT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-02-001".</p> <p>19. PER DRAWING 7327021 FLAG NOTE 11 SHALL READ: -05 OUTER CYLINDER FORGING IS PREFERRED. NEXT ASSY IS DWG 975509-10.</p> <p>20. THE FORGING SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.</p> <p style="margin-left: 40px;">A. PRIOR TO CONTRACT AWARD, THE DETAILED PART BIDDER SHALL PROVIDE CERTIFICATION, FROM THE FORGING SOURCE, TO THE GOVERNMENT THAT THE CERTIFIED DIES AND PROCEDURES ARE AVAILABLE AND THE FORGING SOURCE HAS AN AGREEMENT WITH THE DETAIL PARTS BIDDER TO PROVIDE FORGINGS FOR THEIR USE IN THE EVENT THEY ARE THE SUCCESSFUL BIDDER.</p> <p style="margin-left: 40px;">B. PRIOR TO PRODUCTION, FORGING LOT QUALIFICATION SHALL BE ACCOMPLISHED AS SPECIFIED ON THE FORGING DRAWING AND SAE AMS-F-7190 FOR STEEL FORGINGS AND SAE AMS-A-22771 FOR ALUMINUM FORGINGS. THE DETAILED PART CONTRACTOR SHALL ASSURE THAT THIS HAS BEEN ACCOMPLISHED BY THE FORGING SOURCE AND SHALL SUBMIT CERTIFIED DOCUMENTATION OF ACCOMPLISHMENT TO THE GOVERNMENT.</p> <p>21. FORGING SOURCE, CONTROL OF FORGING DIES AND THE LOCATION OF DIES:</p> <p style="margin-left: 40px;">A. FORGING DRAWING: CD7327021-03 (ALCOA DWG) DIE NUMBE: F-18285</p> <p style="margin-left: 40px;">B. CONTROL OF FORGING DIES: U.S. GOV'T ROBINS AFB</p> <p style="margin-left: 40px;">C. LOCATION OF FORGING DIES: ALCOA FORGING DIVISION 1600 HARVARD AVENUE CLEVELAND, OH 44105-3040 PHONE: (216) 641-4202 POC: MIMI</p>		
<h2 style="margin: 0;">"PROJECT RIGHTS GUARD"</h2>		
PREPARED BY CAROL HYER	SYMBOL LGMPM	DATE 22 Mar 02

SOURCE QUALIFICATION REQUIREMENTS
(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-195-4810 **LE**
NOUN: OUTER CYL. ASSY. NLG

PART NUMBER (P/N) 975509-10
AIRCRAFT: KC-135

SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 975509-10 and specification MIL-A-22771. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
9. Testing for material and process compliance.
 - (a) Material analysis
 - (b) Heat treat
 - (c) Grinding
 - (d) Plating
 - (e) Finish
 - (f) Grain flow
 - (g) Other

SOURCE QUALIFICATION REQUIREMENTS

(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620-00-195-4810 **LE**

PART NUMBER (P/N) 975509-10

NOUN: OUTER CYL. ASSY. NLG

AIRCRAFT: KC-135

10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.

11. The estimated cost of government testing and evaluation is \$2500.00.

12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

SECTION D

QUALIFICATION WAIVER REQUIREMENTS.

1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.

a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.

b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.

c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.

2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.

3. Maximum time for approval of qualification by similarity will not exceed 15 days.

Competitive Landing Gear Strategic Sourcing Initiative

RFP Questions / Comments

RFP F42630-03-R-3321 (Non-Set Aside)

RFP F42630-03-R-3322 (Set Aside)

To submit a question or comment in reference to the above listed RFPs...

- Complete the following document
- Use the **tab** key to move between the form fields
- Email the completed document to Salli Beringer at salli.beringer@hill.af.mil.

A response will be emailed to you in a timely manner. All questions and comments received will be posted at

<http://contracting.hill.af.mil/newcontracting/Opportunities/Commodities/2003RAA/AE/LGSI.htm> in the "RFP Question / Comment Responses" document.

Contact information

Company Name

Company Address

Contact Name

Contact Phone Number

Contact Email Address

Select the RFP the question / comment pertains to.

-Select RFP-

Select the Section of the RFP the question pertains to.

-Select RFP Section-

Select the category the question / comment pertains to.

-Select Category-

Question / Comment

Please include NSN as applicable
